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THE

COTTAGE PHYSICIAN,

PROVEN FACTS OF MEDICAL SCIENCE AND FAMILY EXPERIENCE.

MOST APPROVED METHODS OF TREATMENT

——IN ALL——

MEDICAL AND SURGICAL EMERGENCIES OF THE HOUSEHOLD.

HOW TO RETAIN HEALTH, ERADICATE DISEASE AND LENGTHEN LIFE,

——BY——

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NEARLY 200 ILLUSTRATIONS.

W. C. KING & CO., PUBLISHERS,

SPRINGFIELD, MASS.,

Des Moines, Iowa, Lewiston, Me.,
Nashville, Tenn., London, Eng.

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PREFACE

THE COTTAGE PHYSICIAN has been prepared expressly for the people, and will prove a never failing guide in all the medical and surgical emergencies of the household. Its aim is to give plain, practical information regarding the ailments of mankind, with the most approved methods of promoting health and treating disease, in language so simple and comprehensive that a child can understand its meaning. Scientific terms and doctors' phrases have been carefully interpreted and the work stripped of that cloud of mystery which has characterized so many kindred publications.

The work embraces much useful knowledge of medical science never before brought together in one volume. It tells all that medical science and experience have developed for generations. However, eternal health is not promised to all who read these pages, neither do we expect the book to take the place of the physician, but rather to aid him, and if its teachings are carefully followed, his visits will be less frequent and health more abundant.

THE AUTHOR.



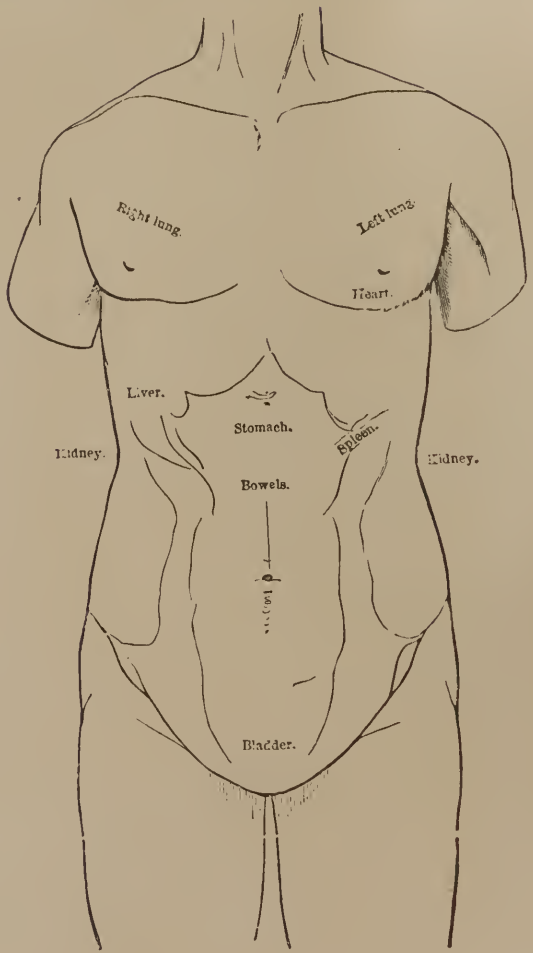
THE COTTAGE PHYSICIAN



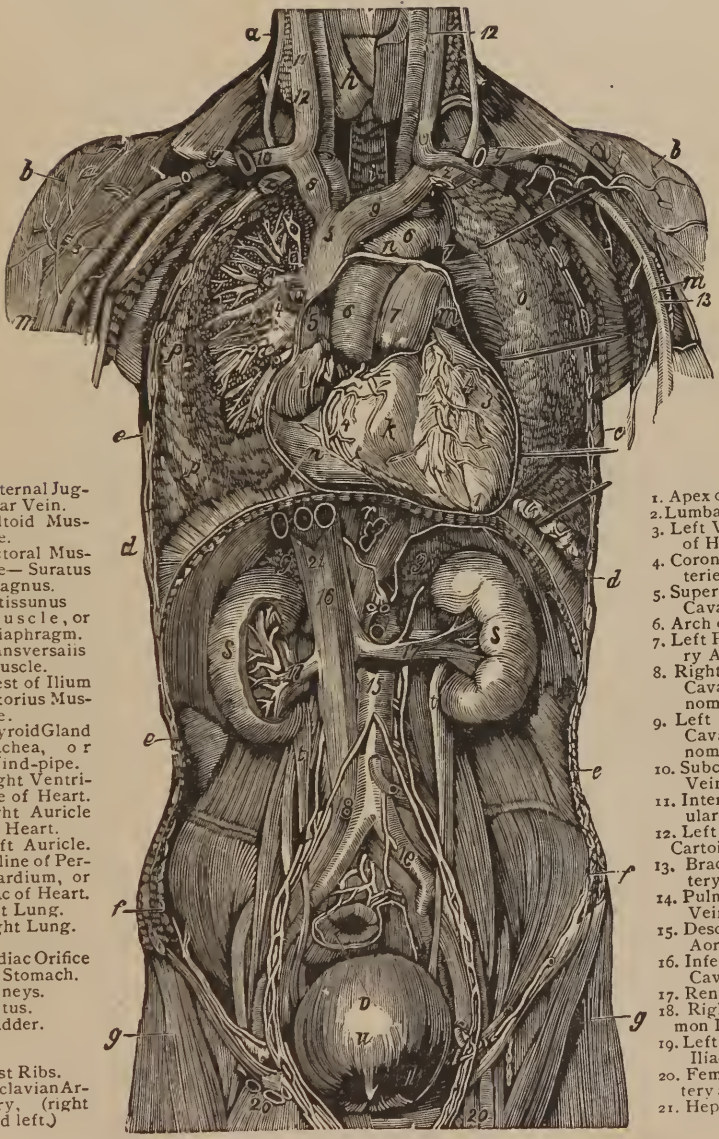
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EXTERNAL LOCATION OF THE ORGANS.

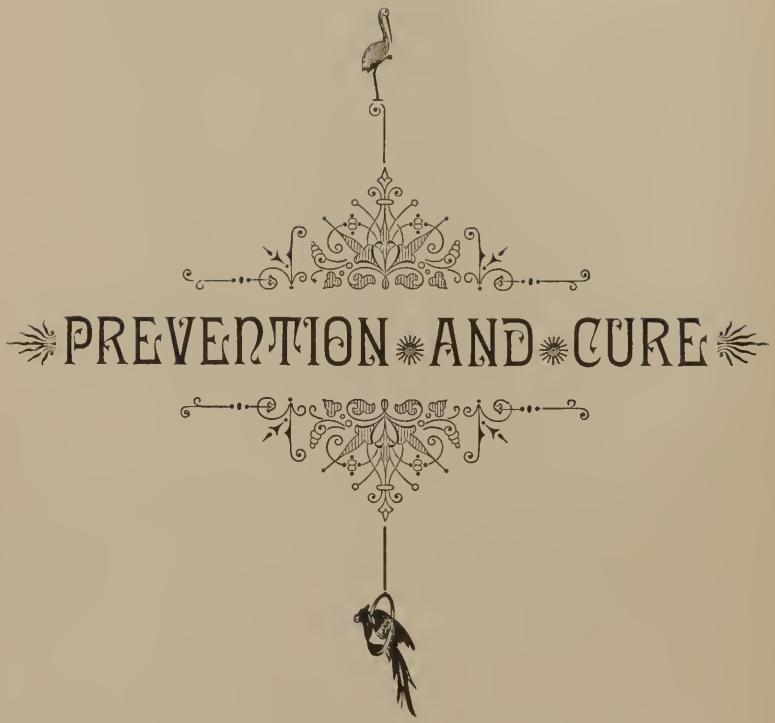


INTERNAL LOCATION OF THE ORGANS.



a. External Jugular Vein.
b. Deltoid Muscle.
c. Pectoral Muscle— Suratus Magnus.
d. Latissunus Muscle, or Diaphragm.
e. Transversalis Muscle.
f. Crest of Ilium
g. Sartorius Muscle.
h. Thyroid Gland
i. Trachea, or Wind-pipe.
k. Right Ventricle of Heart.
l. Right Auricle of Heart.
m. Left Auricle.
n. Outline of Pericardium, or Sac of Heart.
o. Left Lung.
p. Right Lung.
q.
r. Cardiac Orifice of Stomach.
s. Kidneys.
t. Uretus.
u. Bladder.
w.
x.
y. First Ribs.
z. Subclavian Artery, (right and left.)

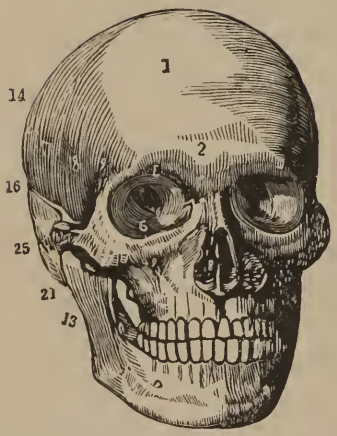
1. Apex of Heart.
2. Lumbar Glands
3. Left Ventricle of Heart.
4. Coronary Arteries.
5. Superior Vena Cava. (Vein.)
6. Arch of Aorta.
7. Left Pulmonary Artery.
8. Right — Vena Cava, or Innomenata.
9. Left — Vena Cava, or Innomenata.
10. Subclavian Vein.
11. Internal Jugular Vein.
12. Left Common Cartoid Artery.
13. Brachial Artery.
14. Pulmonary Veins.
15. Descending Aorta.
16. Infer or Vena Cava.
17. Renal Vein.
18. Right—Common Iliac Vein.
19. Left, Common Iliac Artery.
20. Femoral Artery and Vein.
21. Hepatic Veins


PREVENTION AND CURE

ANATOMY OF THE HUMAN BODY.

The Head.—The head is the upper or crowning part of the human frame. It consists of the skull, or cranium, and the face—the former being, as it were, a case for the brain. It is composed of eight bones, connected together by sutures, or joinings, some having toothed or serrated margins, which fit into each other—some overlapping and others interlacing—a structure marvelous at once for its strength and lightness. Between the interior and exterior wall of the frontal or forehead bone are what are called the frontal sinuses, two hollow chambers, which cause those bulgings above the upper edges of the orbits; and in the hollows beneath them lie, sheltered and protected, the eyes. Behind each ear there is also a bony prominence to which the powerful muscles are affixed, which are distinctly seen in the neck, whose lower ends are fixed to the top of the breast bones. These are intended to guard the entrance to the internal ear, which is placed wholly within the hollow of the temporal bones. At the base of the skull is a round hole of considerable size, through which the spinal cord, or marrow, passes from the vertebræ to the brain. On either side of this hole are two smooth prominences, called condyles, which rest upon the tops of the uppermost vertebræ, and allow of a nodding motion to the head. Owing to the frequent modification by confluence, or joining together, of the human bones, it is difficult at all times to specify the exact number in any given part, and this is more especially the case in that part which we are now considering.

FIG. 2.



FRONT VIEW OF THE HEAD, AS SHOWN IN THE HUMAN SKELETON.

1, the frontal portion of the frontal bone; 2, the position of the nasal prominence, the hollow within which is shown, the cartilage which supports and forms the nose being mostly removed; 3, over the orbit refers to the supra-orbital ridge; 4, the optic foramen; 5 and 6, the sphenoidal and the spheno-maxillary fissures; 7, lachrymal fossa in the lachrymal bone, where the nasal duct commences; 4, 5, 6, and 7 refer to parts within the orbit; 8, the opening of the anterior nares, divided into two parts by the vomer, on which the cypher is placed; 9, the infra-orbital foramen; 10, malar bone; 11, symphosis of lower jaw; 12, mental foramen; 13, ramus of lower jaw; 14, parietal bone; 15, coronal suture; 16, temporal bone; 17, squamous suture; 18, upper part of the great ala of the sphenoid bone; 19, commencement of the temporal ridge; 20, zygoma of the temporal bone, assisting to form the zygomatic arch; 21, mastoid process.

FIG. 3.



THE LOWER SURFACE OR BASE OF THE BRAIN.

a is the cerebrum or brain proper, occupying the upper part of the cranium, and divided into two hemispheres, each of which is subdivided into an anterior, middle, and posterior lobe; *b c*, between these lobes, are fissures or boundaries termed clefts or *sulci*, which penetrate to the depth of about an inch. The two hemispheres of the cerebellum or little brain, which occupies the lower or back part of the cranium, are marked *d*. They differ in form and arrangement from the superior portion, being composed of flattened *laminæ* or layers; *e* is the *medulla oblongata*, very much the smallest portion of the mass, which passes out of the cavity of the cranium into that of the vertebral canal, being a continuation of the spinal cord, of which the whole brain may be considered as an expansion; *g*, *f*, *f*, *o*, mark the shape and position of certain cerebral nerves; *h*, olfactory nerves.

The Brain.—The human brain, the average weight of which is three pounds in the male, and four or five ounces less in the female, is divided into three distinct parts, called the cerebrum, cerebellum, and medulla oblongata. Of the membraneous coverings which enclose that soft, pulpy, organic mass, two have been called *mater* (mother), from the old notion that they gave rise to all the other membranes of the body; these are the *pia mater* and *dura mater*—the former is a very delicate tissue, covered in every part with minute blood-vessels, which are, in fact, the nutrient arteries of the brain, before entering which they divide and subdivide upon the external surface to an extreme degree of minuteness, so as to prevent the blood entering upon the tender cerebral substance in too forcible a manner. The *dura mater* is a much stronger and coarser membrane, which lines the inner portion of the skull, and forms an external covering for the brain and its appendages. It gives off several elongations, which are called processes, and which descend between certain portions of the brain; that termed the superior longitudinal process is the most remarkable, on account of its size—it extends from the fore to the back part of the skull, between the latter halves of the cerebellum, and, on account of its shape, is called *falx cerebri*, meaning scythe-like.

Under the microscope, the cerebral substance is found to be composed of pulp containing both cells and tubes; the outer portion of it is termed cineritious, on account of its brownish-grey color; by some it is termed cortical, from *cortex*—bark—because it forms, as it were, the first coat of the mass; by others, glandular or secretory, on the supposition that it is of the nature of a gland whose office is that of secretion. It consists of fine cellular membrane, sustaining and connecting a complete net-work of small blood-vessels. Larger in quantity, and firmer in consistence, is the inner substance termed white or medullary; it is said to consist of minute fibres, woven together like plaited straw. In man the brain is much larger than in that of the inferior animals—that of an ox scarcely

FIG. 4.



SPINAL CORD.

weighs a pound. It is in the human brain chiefly that those great inequalities of surface exist—those "developments" on which phrenologists build their theories; they are not found in the hare or rabbit, nor in the Rodentia generally; they are neither so bold nor so deep in the ox as in the horse, nor so much so in the horse as in the dog, seeming to increase or diminish very much with the ratio of intelligence, as does also the bulk of the brain; in fishes it is very small, and in the invertebrate animals diminishing to mere nervous ganglions. It is curious to observe that while in the chaffinch, or robin, among birds, it approaches to the proportionate size of that of the human being; in the goose it bears a very much smaller proportion to the bulk of the body.

FIG. 5.



VERTICAL SECTION OF THE BRAIN.

a, *b*, *c*, the cerebrum; *d*, the cerebellum or little brain; *e*, *f*, spinal marrow; *g*, pons varolii; *h*, , cranial bones; *k*, optio thalamus; *m*, fronial sinus; *p*, hard palate; *g*, the larynx; *z*, mouth of Eustachian tube.

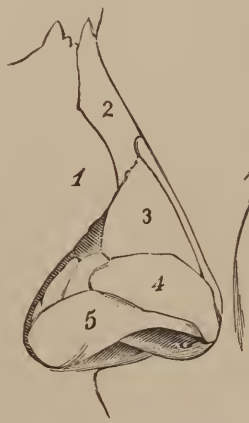
The Nose is the organ of smell in vertebrated animals; and, in the three highest classes, is connected with the respiratory function. In man, the nose, anatomically considered, consists of two large cavities, called nostrils, a right and a left, formed by the bones of the face, and separated from each other by a perpendicular flat partition, called the *septum narium*.

Each nostril is divided by the spongy bone into chambers, termed the superior, middle, and inferior meatus. The upper wall of the nose is pierced by numerous foramina, through which enter the filaments of the olfactory, or nerve of smell.

Besides smell, the nose has ordinary sensation, like other parts of the face, depending on filaments of the trifacial or fifth pair of cerebral nerves. The external prominent part of the nose, which gives character to the feature, is composed of several cartilages connected to the bones and to each other by strong fibrous tissue, sufficiently firm to preserve the shape of

the organ, and so elastic and flexible as to permit the expansion and contraction of the nostrils in respiration. The nose is not only the organ of smelling, but serves also as the chief passage of the air into the lungs, and has a considerable influence upon the voice.

FIG. 6.



FRAMEWORK OF THE NOSE.

1, part of upper jaw-bone: 2, nose bone; 3, upper side cartilage; 4, lower do.; 5, cellular tissue.

FIG. 7.



MUSCLES OF THE NOSE.

1, pyramidal muscle of the nose; 2, muscle to lift the side cartilages; 3, compressor of the nose; 4, front dilator of the nostril; 5, small compressor of the nostril; 7, muscle to pull down the side cartilages.

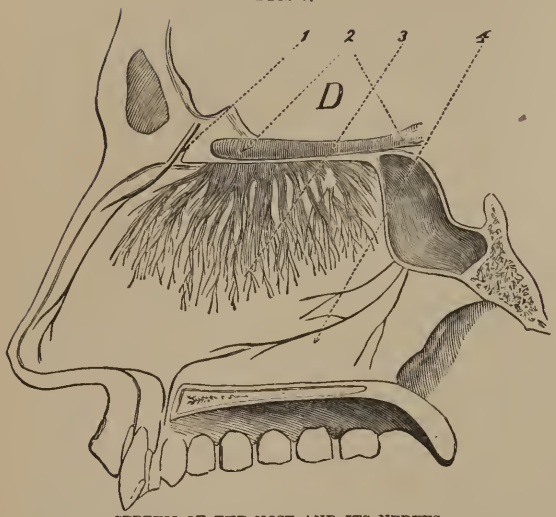
The Nerves.—These are cord-like substances arising from the brain or spinal marrow, and distributed to every part of the system. They are of two kinds—one white and opaque in appearance, and presenting, under the microscope, a tubular or fibrous structure, and the other of a reddish-grey color, semi-transparent, and consisting of cells or vesicles filled with granular matter; these latter kind of nerves are but sparingly distributed in proportion to the former, and appear to form the apparatus by which the nervous force or energy is generated, to be conducted through the tubular substance to the points of action; we may shortly state then, of these two kinds of nerves, that one gives feeling and the other motion; and of the whole nervous system of the human body, that it is composed of the brain and cranial

FIG. 8.



THE CEREBELLUM, OR SMALL BRAIN, AS SEEN FROM THE BACK.

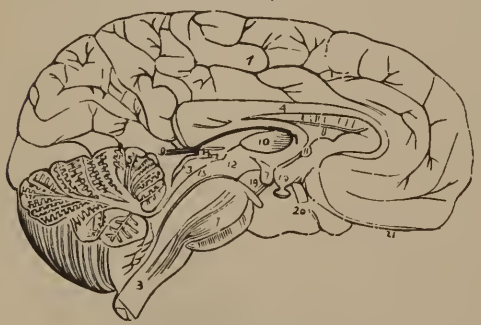
FIG. 9.



SEPTUM OF THE NOSE AND ITS NERVES.

1, nerve of the lobe of the nose; 2, olfactory lobe; 3, nerves of the septum; 4, nerve of the palate.

FIG. 10.



MESIAL SURFACE OF THE BRAIN.

Fig. 10 represents the mesial surface of a longitudinal section of the brain. 1. Inner surface of left hemisphere. 2. Divided centre of the cerebellum, showing the arbor vitæ. 3. Medulla oblongata. 4. Corpus callosum. 5. Fornix. 6. One of the crura of the fornix. 7. One of the corpora albicantia, pea-shaped bodies between the crura cerebri. 8. Septum lucieum. 9. Velum interpositum. 10. Section of the middle commissure in the third ventricle. 11. Section of the anterior commissure. 12. Section of the posterior commissure. 13. Corpora quadrigemina. 14. Pineal gland. 15. Aqueduct of Sylvius. 16. Fourth ventricle. 17. Pons varolii, through which are seen passing the diverging fibres of the corpora pyramidalia. 18. Crus cerebri of the left side; the third nerve arising from it. 19. Tuber cinereum, from which projects the infundibulum, having the pituitary gland appended to its extremity. 20. One of the optic nerves. 21. The left olfactory nerve terminating anteriorly in a rounded bulb.

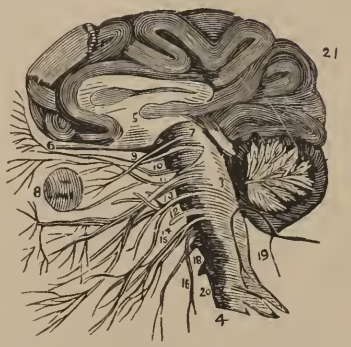
nerves; the spinal cord, and spinal nerves, and the sympathetic nerves. Of the structure of the brain we have already spoken; of the spinal cord or marrow we may briefly say, that it is composed of a whitish substance similar to that of the brain, and is covered with a sheath or membrane, which extends from the former organ through the whole length of the spinal column. In Fig. 12 we have a representation of the spinal cord, surrounded by its sheath, marked by the letters E E, the cord itself being represented by A; B is a spinal nerve, formed by the union of the motor root (C) and the sensitive root (D) where the knot or ganglion is seen.

The sympathetic nerve consists of a series of these ganglia or knots, which extend down each side of the spinal column, forming a kind of chain throughout its whole length,

communicating to both the cranial and spinal nerves, and distributing branches to all the internal organs.

These nerves, then, are undoubtedly the organs of feeling and sensation of every kind—through them the mind operates upon the body. The intelligent mind, whose seat is in the brain, *wills* that a certain action shall be performed, and instantly through the main channel of communication, the spinal cord, the message flies, branching off here or there, according to the direction in which the work is to be done, and setting in motion the muscles which perform it.

FIG. 11.

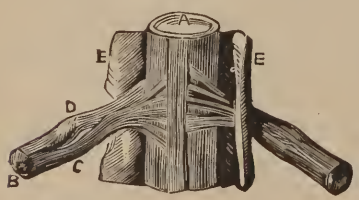


SECTION OF THE BRAIN AND SPINAL CORD, SHOWING THE RELATION OF THE CRANIAL NERVES TO THESE ORGANS, AND TO THOSE OF THE SENSES TO WHICH THEY BELONG.

1, the cerebrum; 2, the cerebellum, with its foliated portion, sometimes termed arbor vitæ; 3 is the medulla oblongata (oblong marrow), which forms the top of the spinal cord, which is represented by 4 and 5; the first pair, or nerves of smell, are marked by 6; the second pair, or nerves of sight, by 7 and 8; the third, fourth, and sixth pairs, which pass to the muscles of the eye, 9, 10, 12; the fifth pair, nerves of taste, which are also the sensitive nerves of the teeth, 11; the seventh pair, passing to the muscles of the face, 13; the eighth pair, nerves of hearing, 14; the ninth, tenth, eleventh, and twelfth pairs, which pass to the tongue, larynx, and neck, 15, 16, 18, 19; and 20 indicates two of the spinal nerves, which latter are arranged in thirty-two pairs, each arising by two roots, the one called the anterior or motor root, and the other the posterior or sensitive root.

Fig. 15 will give a good idea of the way in which the nerves spread and ramify throughout the body; it represents a back view of the brain and spinal cord. The spine is the great main channel of nervous sensation, and the principal support to the bony frame; this is one of the most important parts of the human structure; it is sometimes called the vertebral column, being composed of a number of vertebræ, or short, single bones, so named from their peculiar construction, the term coming from the Latin *verto*, to turn—these bones turning upon each other in such a manner as to give flexibility to the spine, which is the first developed portion of the skeleton in man, and the centre around which all the other parts are produced. "In its earliest formation," says Wilson, "it is a simple cartilaginous cylinder, surrounding and protecting the primitive trace of the nervous system; but as it advances in growth and organization, it

FIG. 12.



becomes divided into distinct pieces, which constitute vertebræ."

By the aid of Fig. 16 the peculiarities of construction will be best understood. The upper vertebra of the cervical region —termed the *atlas*, because it is the immediate support of the head—differs somewhat from this in shape; so also does the second, called the *axis*, and the seventh or last, termed *prominens*.

FIG. 13.



GANGLION OF A SYMPATHETIC NERVE.

In the lumbar vertebræ are the largest pieces of the whole column; here the body is large and broad, and thicker before than behind; the pedicles very strong, and the laminæ short, thick, and broad, as is also the spinous process.

Fig. 19 represents the coccyx (Greek for cuckoo), so-called from its fancied resemblance to a cuckoo's beak; it forms the caudal termination or tail of the vertebral column.

Did the bodies of the vertebræ rest immediately upon each other, there would be a rigid column which could not be bent in any direction without displacement of the bones; but, to provide against this, they are separated from each other by very elastic "intervertebral cartilages," which yield to every motion of the body, and prevent that shock to the brain which must occur at every step taken, were not some such provision made. Then, again, the vertebræ thus beautifully fitted into each other, and resting upon soft, yielding cushions, are braced together by a series of ligaments of different kinds, which, while they allow of all necessary motions, yet restrain it from going too far. By means of these and the muscles, which are mostly attached in a longitudinal direction, and chiefly to the posterior portions of the vertebræ, the equilibrium of the spine, and the motions of the body generally, are effected.

Each vertebra having a triangular opening corresponding in position with the rest, there runs through the whole of the column a canal, which is filled with the nerve substance and membranes, composing what is called the spinal cord, that communicates with the brain through an opening in the base of the skull.

It is scarcely necessary for us here to go more deeply into the structure of the nervous fibres and cells, else might we state many curious and interesting facts concerning this part

of the animal economy. Some idea of their nature and the beauty of their arrangement may be seen by the accompanying diagrams. Like the veins and arteries, they spring from great main channels, which may be compared to the stem and arms

FIG. 14.

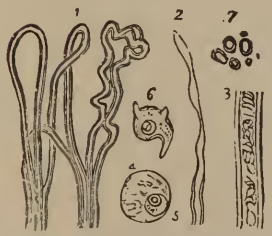
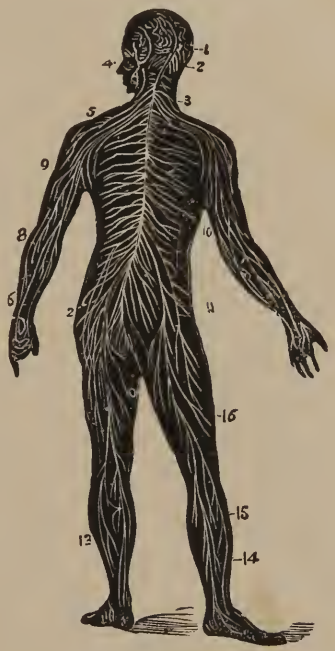


FIG. 14 represents the microscopic elements of the nervous structure. 1, Mode of termination of white nerve-fibres in loops; three of these loops are simple, the fourth is convoluted. The latter is found in situations where a high degrce of sensation exists. 2, A white nerve-fibre from the brain, showing the varicose or knotty appearance produced by traction or pressure. 3, A white nerve-fibre enlarged to show its structure, a tubular envelope and a contained substance—neurilemma and neurine. 4, A nerve-cell showing its capsule and granular contents. 5, Its nucleus containing a nucleolus. 6, A nerve-cell, from which several processes are given off; it contains also a nucleated nucleus.

FIG. 15.



THE NERVOUS SYSTEM.

1, the cerebrum. 2, cerebellum. 3, spinal cord. 4, nerves of the face. 5, the brachial plexus or union of nerves. 6, 7, 8, 9, nerves of the arm. 10, those that pass under the ribs. 11, lumbar plexus. 12, sacral plexus. 13, 14, 15, 16, nerves of the lower limbs.

of a tree, and branch out from thence in every direction, dividing and subdividing into the most minute ramifications—so that you cannot so much as prick any part of the surface of the body but pain is felt, a sure evidence that a nerve has been touched; nay, so much as a breeze cannot blow upon the body, nor the wing of an insect touch it, but the nerves give information thereof to the brain, and the mind is made aware of the cause, and takes its measures accordingly. Deli-

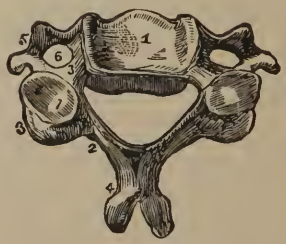
cate strings are these nerves of an instrument of exquisite sensibility—so delicate as to be sometimes invisible to the unassisted vision, that in many parts we are only made aware of their presence by the effects which they produce. They take cognizance of the slightest sound, the faintest ray of light, the least change in the constitution of the air we breathe, and of the food we eat; they are the vigilant sentinels ever watching to guard the body from danger; the constant ministers to its pleasure and delight; often they are attacked and abused, their fine sensibilities deadened and perverted, so that they become subject to disease, and avenge the injury done them by a train of the direst sufferings to which humanity is liable.

FIG. 16.



THE VERTEBRAL COLUMN.

FIG. 17.



A CENTRAL CERVICAL VERTEBRA, SEEN IN THE UPPER SURFACE.

1 is the body, concave in the middle, and rising on each side into a sharp ridge. 2, the lamina of which there is one on each side, commencing at posterior part of the body by a pedicle (3), and expanding and arching backward to meet the other, the two enclosing a foramen or opening through which the spinal cord passes. 4 is the bifid spinous process; and 5 the bifid transverse process: these are both intended for the attachment of muscles; it is the succession of the former projecting along the middle line of the back, which has given rise to the common name of the vertebral column—the spine. 6 marks a vertebral foramen—there is a corresponding one on the other side, and through these pass the vertebral artery and vein, and plexus of nerves. 7 and 8 are the superior and inferior articular processes, the first looking upward and backward, the last downward and forward; of these there are four in each vertebra; they are designed to articulate with the vertebra above and below.

FIG 18.



A LATERAL OR SIDE VIEW OF A DORSAL VERTEBRA.

1, the body. 2 2, articular facets for the heads of the ribs. 3, pedicle. 4 and 5, superior and inferior intervertebral notch. 6, the spinous process. 7 is the extremity of the transverse process, marked by an articular surface, for the extremity of a rib. 8 and 9, the two superior and two inferior verticular processes.

FIG. 19.



THE COCCYX.

1, 2, 3, and 4 are the four pieces of bone composing it. 5 5, the transverse processes of the front pieces. 6, articular surface for the extremity of the sacrum, which is the triangular bone composed of five false vertebra, forming the base of the column. 7 7, the cornua or horns which articulate with the sacral cornua.

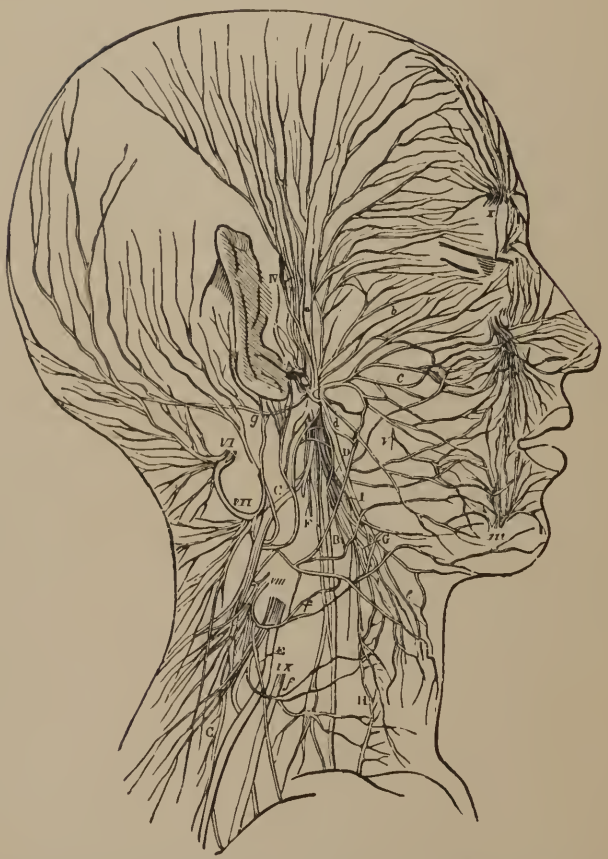
FIG. 20.



NERVES OF THE PAPILLÆ OF THE SKIN.

A very highly magnified view of the terminal loops of the sensitive nerves as they rise to the rows of papilla, giving sensibility to all parts of the body.

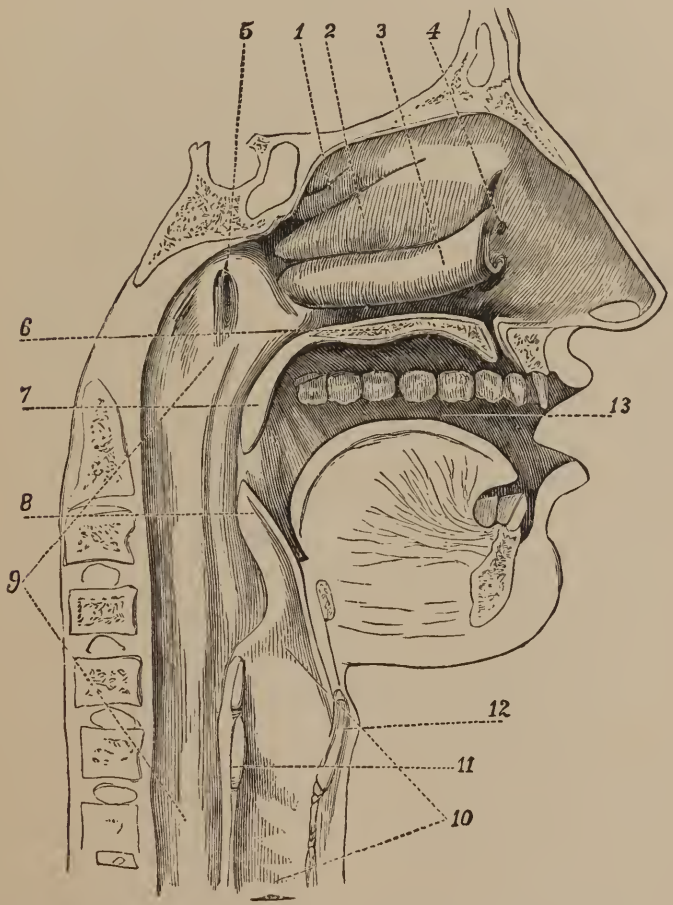
FIG. 21.



I. Frontal branch of the fifth nerve of the brain which bestows sensation alone. II. Superior maxillary, or that branch of the fifth nerve which supplies the upper jaw, and which, like the last, arising from the sensitive root, bestows sensation alone. III. Mental or inferior maxillary branch of the fifth nerve. This also comes from the sensitive root. It is called mental, because it is involved in that expression which indicates the emotions of the mind. IV. Temporal branches of the same fifth nerve. They are distributed on the temples, and are for sensation. V. The only branch of the fifth nerve which arises from the smaller or motor root, and assists in the motion of those muscles which are employed in mastication or chewing. VI, VII, VIII, IX. These are spinal nerves—the first of the series which come out between the vertebra, in the whole length of the spine, to supply the body generally with motion and sensation. A. The facial nerve. It is situated in the front of the ear, and is the motor nerve of the features. It sends branches (*a*) to the muscles of the forehead and eyebrows. Branches (*b*) to the eyelids. Branches (*c*) to the muscles which move the nostrils and upper lip. Branches (*d*) to the lower lip. Branches (*e*) going down to the side of the neck. Connections (*f*) with the spinal nerves of the neck. A nerve (*g*) to a portion of the muscle that is in the back of the head, and to muscles of the ear. B. The nervus vagus, or the wandering nerve, so named from its extensive distribution. This is the grand respiratory nerve. C. The spinal accessory nerve. D. the ninth nerve, which is the motor nerve of the tongue. E. The nerve which supplies the diaphragm. F. Branch of the sympathetic nerve. G. A branch of the nervus vagus, which goes to the superior portion of the larynx or windpipe. H. Another branch of the vagus, which goes to the inferior portion of the larynx. I. The nerve which goes to the tongue and upper part of the gullet called the pharynx.

The Throat, as popularly understood, is of somewhat indefinite meaning; for few can tell where the throat begins and ends, or what organs it includes. It is generally understood to mean that part of the human frame in which are the

FIG. 22.



VERTICAL SECTION OF THE HEAD, SHOWING THE RELATION OF AIR AND FOOD PASSAGES.

1, upper turbinated bone; 2, middle turbinated bone; 3, lower turbinated bone; 4, hole leading to the canal which drains the eye; 5, Eustachian hole; 6, palate; 7, uvula; 8, epiglottis; 9, pharynx; 10, larynx; 11, cricoid cartilage; 12, thyroid cartilage; 13, cavity of the mouth.

passages for food and breath, namely, the gullet and windpipe, or all that hollow cavity which may be looked into when the mouth is wide open.

The Trachea is the cartilaginous and membranous canal through which the air passes into the lungs, commonly known

FIG. 23.



THE PHARYNX LAID OPEN FROM BEHIND.

a, tongue; *b*, palate; *d*, *e*, front and back of the palate; *f*, walls of the pharynx; *g*, posterior nares, separated by the vomer; *h*, epiglottis; *i*, head of windpipe; *k*, œsophagus; *l*, windpipe; *m*, under jaw.

as the windpipe. Its upper part is called the larynx, the uppermost and smallest part of which is called the epiglottis, being placed over the glottis, or mouth of the larynx, and serving to close the passage to the lungs in the act of swallowing. From the lower end of the larynx the canal takes the name of trachea, and extends as far down as the fourth or fifth vertebra of the back, where it divides into two branches, which are the right and left bronchial tubes. Like the larynx, it is formed of cartilages, united to each other by means of very

elastic ligamentous fibres. It is also furnished with fleshy or muscular fibres, some of which pass through its whole extent longitudinally, while others are carried round it in a circular direction; and hence it may shorten or lengthen itself, or contract or dilate its passage.

FIG. 24.



INTERIOR OF THE MOUTH.

Larynx is the name given to the organ of the voice, situated at the upper and fore part of the neck, where it forms a considerable projection. It extends from the base of the tongue to the trachea; is narrow and cylindrical below, but broad above, where it presents the form of a triangular box, being flattened behind and at the sides, whilst in front it is bounded by a prominent vertical ridge. It is composed of cartilages connected together by ligaments, moved by numerous muscles, is lined by the mucous membrane, and supplied with vessels and nerves. The cartilages of the larynx are nine in number, three single and three in pairs, namely, the thyroid, cricoid,

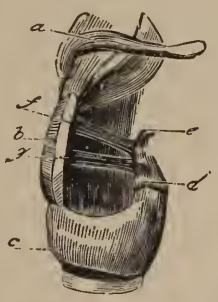
FIG. 25.



BACK VIEW OF THE CARTILAGES AND LIGAMENTS OF THE LARYNX.

a, ligament of the tongue; *b*, epiglottis; *c*, the lateral ligaments connecting the os hyoides and the thyroid cartilage; *d*, cricoid cartilage; *e*, arytenoid cartilages; *g*, the windpipe.

FIG. 26.



SIDE VIEW OF THE LARYNX.

a, ligaments of the tongue, with the epiglottis at the back; *b*, thyroid cartilage; *c*, cricoid cartilage; *f*, *g*, the vocal cords.

epiglottis, the two arytenoid, the two cornicula laryngis, and the two cuneiform. The upper opening of the larynx is

termed the glottis. The vocal ligaments are two narrow bands of dense fibrous and highly elastic tissue, stretched between the anterior angle of the thyroid and the anterior surface of the arytenoid cartilages.

FIG. 27.



BACK VIEW OF THE HEAD OF THE PHARYNX, ŒSOPHAGUS, AND TRACHEA.

a, the skull; *b*, cerebellum; *c*, cephalic artery; *d*, nasal organs; *e*, vomer; *f*, uvula; *g*, tongue; *h*, parotid glands; *i*, epiglottis; *k*, larynx; *l*, head of the pharynx; *m*, œsophagus; *n*, trachea; *p*, left branch; *q*, right branch of the trachea: *r*, large artery; *s*, the heart; *u*, lower vena cava; *v*, the lungs.

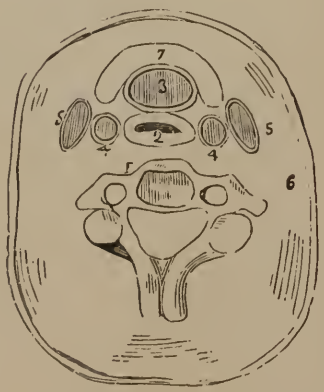
FIG. 28.



MOUTH OF THE WINDPIPE.

a, glottis; *b*, *c*, *d*, the vocal cords.

FIG. 29.



TRANSVERSE SECTION OF THE NECK.

1, vertebræ, or joints of the great spinal column; 2, the œsophagus, or gullet, somewhat flattened, as in a state of rest; 3, the windpipe; 4, 4, the carotid arteries; 5, 5, the internal jugular veins. These, with the nerves, glands, the external jugular veins, and muscles of the neck, are enclosed within the skin marked by the double line and figures 6, 6; in front of the windpipe lies the thyroid gland, 7.

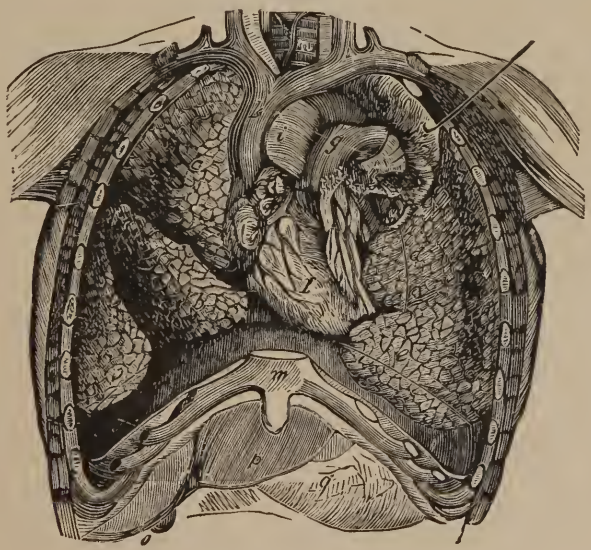
The Œsophagus is the gullet, or the membranous tube leading from the pharynx to the stomach, and forming the

passage through which the food descends into the latter organ. It commences at the cricoid cartilage, opposite the fifth cervical vertebra, and, descending along the front of the spine, passes through the diaphragm opposite the ninth dorsal vertebra, and there ends by opening into the cardiac orifice of the stomach. Its length is about nine inches, and its direction nearly straight, having only two or three slight curvatures. In the neck, the œsophagus lies immediately behind the trachea.

The Pharynx is the muscular funnel-shaped bag at the back part of the mouth, which receives the masticated food, and conveys it to the œsophagus. It is broadest about the middle, being constricted at either end, more particularly below, where it terminates in the œsophagus.

The Tonsils are the round or oval-shaped glands situated between the arches of the palate. In their natural state they can easily be discerned slightly projecting on each side of the fauces; but when swollen and inflamed, as they often are in weakly and scrofulous persons, they are very noticeable, being bright red, and often hanging down so as nearly to close the passage of the gullet, and render swallowing very difficult.

FIG. 30.

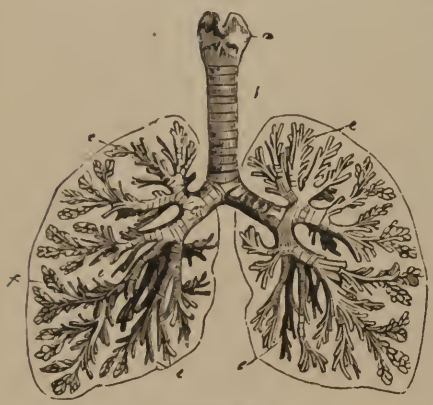


FRONT VIEW OF THE CAVITY OF THE CHEST.

a, *b*, *c*, upper, lower, and middle lobe of the right lung; *d*, *e*, upper and lower lobe of the left lung; *f*, heart; *g*, pulmonary artery,—this artery rises from the right ventricle of the heart, and divides into two branches, one going to each lung; *i*, the aorta, or large artery of the heart; *k*, vena cava; *l*, diaphragm; *m*, chest bone; *n*, windpipe; *o*, *p*, right and left lobe of the liver; *q*, stomach.

The Lungs are two vesicular organs situated in the thorax or chest, the cavity of which, together with the heart and larger blood-vessels, they nearly fill up; so that when the walls of this cavity are compressed, the air is forced out of the minute air-cells of which the lungs are composed, into the several elastic membranes (the bronchi) connected with them. These bronchial passages afterwards unite, and form one tube, the trachea or windpipe, through which the air passes upwards and downwards in the act of inspiration and expiration, or breathing, as it is popularly called. A reference to Fig. 30 will show this more clearly. Here it will be seen how each division of the lungs occupies its own side of the chest; the left is the smallest of the two, because the heart, whose place is between the lungs, takes up more room on that side than the other. The windpipe, or trachea, at the top has the larynx, or organ of voice; while the lower extremity divides into two branches or bronchi, one for each lung, on entering which it divides and subdivides into extremely minute tubes, which terminate in the air-cells, small membranous cavities, on the walls of which the blood circulates in a network of veins, in such a way that it is brought into immediate connection with the atmospheric air, which is drawn in by each inspiration, and so obtains its due supply of oxygen; that, and other gases of which the air is composed, making its way through the extremely thin membrane which forms the air-cells: thus noxious, as well as healthful vapors, or gases, are introduced into the circulation, and men are poisoned by breathing, as well as by eating and drinking, deleterious substances. If we examine the structure of the lungs, we find that it is porous like a sponge; when, by the action of certain muscles, the capacity of the chest is increased, the air rushes in to fill the vacuum, and expansion of the lungs takes place; then, the muscular move-

FIG. 31.



THE LUNGS.

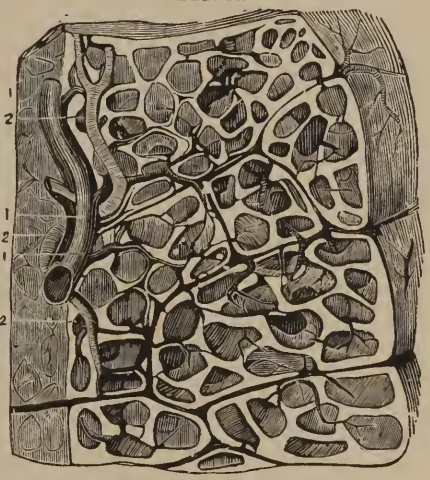
a, the larynx; *b*, the windpipe; *c*, *d*, right and left branches of the windpipe; *e*, *e*, the bronchial tubes; *f*, *f*, pulmonary vesicles.

ment ceasing, the ribs, by their weight and elasticity, contract and force out the air, and this alternate expansion and contraction constitutes breathing, in the act of which we see the chest rise and fall. The tubes, air-cells, and blood-vessels of the lungs, are held together by what is called cellular tissue, and the whole are enveloped in a membrane which covers their surface and also the under surface of the ribs, for which latter purpose it is reflected back. This membrane is called the *pleura*.

The action of the lungs may be forced or increased by an exercise of the will. From fifteen to twenty-two is the average number of respirations in a minute, under common circumstances; but this number may, and often is, very greatly increased by excitement, exercise or disease.

The average weight of the lungs in a healthy condition is about forty ounces. They are, as we have seen, of a conical shape, embracing the heart between them, being internally concave to receive this organ, and externally convex to suit the concavity of the chest. In their narrow part upward they extend a little above the fifth rib, their broad and slightly concave bases resting upon the diaphragm, and extending further down behind than before. Their color is a pinkish gray, mottled with black,—their shape we have already explained. They hang free in the chest, except where they are attached to the spine, or rather to the *mediastinum*, by the pulmonary arteries and veins, and by the bronchial tubes on either side. The areola, or cellular tissue, which connects together the arteries, veins, or cells, &c., is called the *parenchyma* of the lungs, and constitutes the second distinct tissue, of which they are composed,—the first, or outer, being the pleura, and the third, or inner, the mucous lining of

FIG. 32.



MAGNIFIED VIEW OF A SECTION OF THE LUNG.

Showing the arrangement of some of the lobules, the communication of the air-cells in one lobule, and their separation from those of the adjoining lobule. The ramifications of the blood-vessels in the texture of the lung, and their course through the air-cells are also seen. 1. 1, branches of the pulmonary veins; 2, 2, branches of the pulmonary artery.

the air passages, or cells into which the air enters when we breathe. So great is their number that they have been calculated to amount to 170,000,000, forming a surface thirty times greater than the human body. Every one of these cells is provided with a network of blood-vessels, by means of which the blood is brought into immediate contact with the air over every portion of their surface.

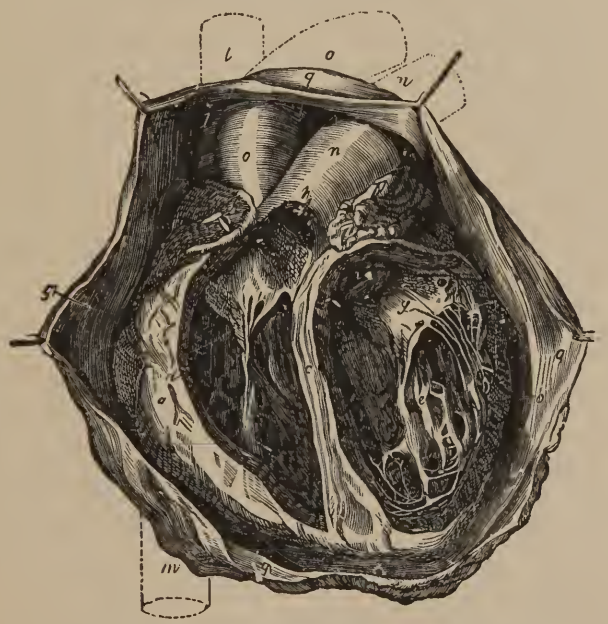
The lungs of an infant before birth are dark red, and contracted into a small space, within the cavity of the chest. They are firm, and specifically heavier than water, in which therefore they sink, whether entire or cut into pieces. They also give out little or no blood, and no air-bubbles arise from them. This, therefore, is considered a good test whether a newly-born infant found dead, under suspicious circumstances, was really born so. If it has ever breathed the lungs will have become inflated, so as to float on water; they will then be of a pale-red color, and appear of a loose spongy texture; having expanded, too, so as to fill the cavity of the chest, and cover the heart, as we see them in the diagram of that organ above referred to.

The diseases to which the lungs are mostly liable, are all, in their first stages, of an inflammatory character; and it is important to ascertain, as soon as they are attacked, in which of the various tissues, or other structures, the mischief resides. The state of the lungs can generally be ascertained with tolerable certainty by means of auscultation: the passage of air into, and through them, giving rise to certain definite sounds well understood by the practised ear, applied closely to the outside of the chest, either with or without a stethoscope. When the lungs are not affected, these sounds vary but slightly in different individuals; so that any deviation from their ordinary and natural tone, or compass, is easily detected as an indication of disease, which sometimes renders the lung so solid that the air cannot penetrate its tissues, and sometimes fills the cavity which contains it with water. In either case, percussion will but make a dull, heavy sound. Then the power of conducting sound varies according to the condition of the structure, so that an application from without is sure to produce such a response from within as gives the skilled physician all the information which he requires.

The Heart is the great central organ of circulation. Its form is that of an irregular cone, having its base directed backward towards the spine, and its point forward and downward towards the left side; so that at each contraction it may

be felt striking between the fifth and sixth ribs, about four inches from the median line. In this position it rests upon the diaphragm, having the surface on which it lies much flattened. On its right side, it is firmly attached to the diaphragm, which, it should be remembered, is the muscular partition between the chest and abdomen; and behind, by the vena cava, or trunk vein which passes through the diaphragm.

FIG. 33.



FRONT VIEW OF THE HEART, WITH THE WALLS OF THE RIGHT AND LEFT VENTRICLES REMOVED.

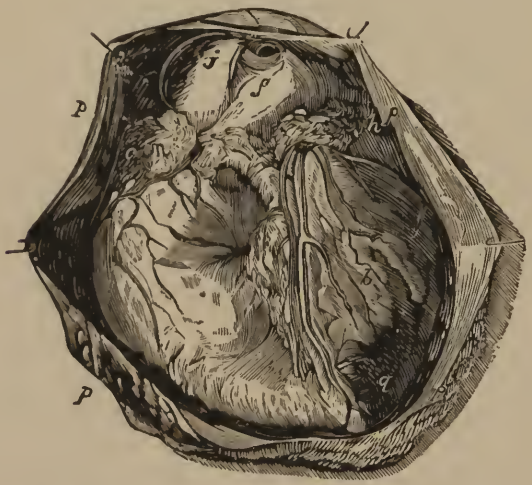
a, *b*, right and left walls of the ventricles; *c*, septum ventriculorum; *d*, cavity of the right ventricle; *e*, cavity of the left ventricle; *f*, valves of the right ventricle; *g*, valves of the left ventricle; *h*, entrance of the pulmonary artery; *i*, entrance of the aorta; *l*, *m*, upper and lower vena cava, *n*, pulmonary artery; *o*, aorta; *q*, heart-case, or pericardium.

Behind and above, the heart is also attached, although somewhat loosely, to the upper and back part of the chest, by the vessels which there pass out of the pericardium, or membranous bag in which the heart is perfectly enclosed, although it is sufficiently loose to allow of free motion. In a healthy state, the pericardium is lined with what is called the serous mem-

brane, which is smooth and moist, and constitutes its inner coat or layer, the outer one being fibrous. This membrane is also reflected, so as to give the heart two coverings, which, at every motion of the organ, glide smoothly over each other, and thus prevent friction.

The heart may be popularly described as a hollow muscle, having four cavities, two on each side. Its action is that of a kind of double pump, intended to carry on the twofold circulation, namely, through the body and through the lungs. The

FIG. 34.



FRONT VIEW OF THE HEART, WITH THE PERICARDIUM DRAWN ASIDE.

auricle and ventricle, on the left side, being devoted to the former, and those on the right to the latter. Between the cavities on one side, and those on the other, there is no natural communication, but each auricle is connected with its corresponding ventricle, by a valve which only opens by pressure on one side, so that the blood cannot pass except in the right direction,—any attempt to return being instantly resisted by the closing of the bag-like valves. Should these become diseased, so that they perform their office imperfectly, there will be regurgitation, or passing back of the blood, and that occasions serious derangement of the balance of circulation, resulting in organic disease. These valves, which are also placed

where the blood-vessels enter the different cavities of the heart, consist of membranous folds, and are, according to their form, either sigmoid or semilunar. The regurgitation of blood into the lungs or other parts of the body, is not an unfrequent cause of hemorrhage or dropsy.

FIG. 35.



IDEAL SECTION OF MAMMALIAN HEART.

1, superior vena cava; 2, inferior vena cava; 3, left auricle; 4, left ventricle; 5, mitral valve; 6, septum ventriculorum; 7, aorta; 8, pulmonary arteries; 9, pulmonary veins; 10, right auricle; 11, right ventricle; 14, descending aorta; 15, tricuspid valves.

It will, perhaps, conduce to the better understanding of all this if we enter a little more fully into explanation, and refer back to Fig. 30, which exhibits the heart more in its relations to the surrounding parts. Let it be understood that the two large lobes on either side are the lungs: *f* is the heart itself, receiving into its right auricle the blood from the vena cava (*k*); this is the *venous* circulation, which has gone through the system, and is on its way back to the lungs to be reoxygenized. Opposite to this, or on the left side, is the left auricle, into which the purified blood passes through the ventricle, and is pumped out into the aorta (*i*), and pulmonary artery (*g*). These are the main channels of the *arterial* circulation. The contraction of the auricle to force out the blood is called *systole*, and that of the ventricle *diastole*. At the root of each of the above-named arteries are three valves, which are like membranous bags, so arranged that when there is any regurgitation they assume the appearance represented by Fig. 36.

FIG. 36.



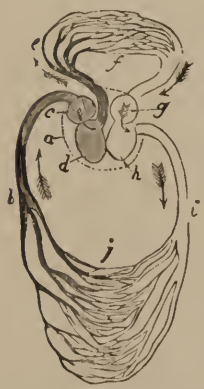
HEART VALVE.

The heart not only by its contraction propels the blood, but in its expansion it acts as a sucker to draw it up, so that it is at once both a sucking and a forcing pump; and such is the power of its action that the whole mass of the circulation, about twenty-eight pounds, goes through the system in the space of three minutes.

The Face, Lips, Mouth, Jaws, Teeth, and Gums.—The Face is the lower and front portion of the head. It consists of fourteen bones firmly joined together, except in the instance of the lower jawbone. The principal cavities are the orbits of the eyes, the opening for the passage of the tears into the nose, and the opening for the optic nerves. The nasal

cavity in the skull is large,—the nose being composed chiefly of cartilage, divided by thin vertical plates, pierced above with numerous holes for the passage of the olfactory nerves.

FIG. 37.



IDEAL VIEW OF THE COURSE OF CIRCULATION.

a, incloses the four chambers of the heart; *b*, veins bringing dark blood to *c*, right auricle; *d*, right ventricle; *e*, pulmonary artery; *f*, beginning of pulmonary vein conveying the arterialized blood to *g*, left auricle; *h*, left ventricle; *i*, arteries. The arrows show the direction of the current.

The muscles of the face are numerous; and to these we are indebted for that infinite variety of expression that characterizes the human countenance, and gives manifestation to the workings of the human mind.

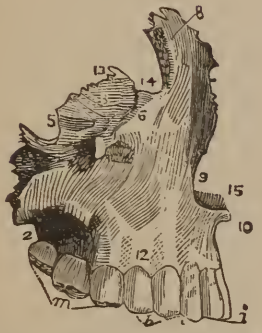
The Lips are the edge or border of the mouth. In man, and some other animals, the lips are two fleshy muscular parts, composing the exterior of the mouth. In man they cover the teeth, and form part of the organs of speech, being essential to the utterance of certain sounds, called *labiates* in consequence. These parts owe their red color to their extremely vascular structure, and the thinness of the covering membrane; and their sensitiveness, to their abundant supply of minute nerves. By the color and general appearance of the lips, we may often judge with tolerable accuracy of the health of the individual: if they be pale, and thin, and shrunken, there is a deficiency of the red globules in the blood, and a want of vigor in the circulation. This we find to be the case in anæmia and some other forms of disease. When the lips are full, and have more or less purple in their tint, we know that the blood does not undergo its proper changes, and that there is danger of congestion towards the brain.

The Mouth is the cavity in which the tongue and teeth are contained, which serves as a receptacle for the food which is to be conveyed to the stomach, and by means of which articulate sounds are rendered possible. The parts which are immediately connected with it are the lips, the upper and lower jaws, the palate and tonsils, and the fauces generally. It is lined by the mucous membrane, which stretches from the tongue to the lower jaw, and is surrounded by the salivary glands, which open into ducts in various parts of the cavity, and supply it with moisture.

The Upper Jaw, or, as they are generally called, the Superior maxillary bones, are the largest bones in the face, with the exception of the inferior maxillary or lower jaw-

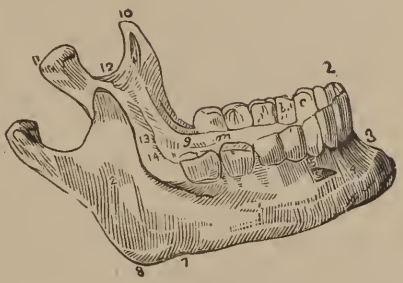
bone. They form, by their union, the whole of the upper jaw, and assist in the construction of the nose, orbit, cheek, and palate.

FIG. 38.



THE RIGHT SIDE OF THE SUPERIOR MAXILLARY, AS SEEN IN ITS LATERAL ASPECT,

FIG. 39.

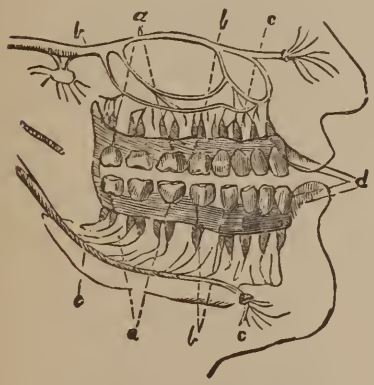


THE LOWER JAW, OR INFERIOR MAXILLARY.

The muscles of the jaws, as might be supposed from the work they have to do, are strong and numerous. The action of the lower jaw is effected by the attachment of fourteen pairs, and of the upper by that of ten muscles. Many nerves, arteries, and veins, are also connected with them.

The Teeth.—True bony teeth are found only in the higher or vertebrated animals, and of these only the highest class,—the mammalia, at the head of which is man, have them in single rows in each jaw. The human adult has these rows arched, and sixteen teeth in each row. They are of three kinds, as represented in the annexed diagram.

FIG. 40.



THE TEETH AND THEIR NERVES.

First we have the large teeth behind, with broad flat surfaces, which, on account of their functions, are called Grinders (*a*); they are sometimes termed Molar Teeth or Molares. Altogether they are twelve in number, being three on each side of both upper and lower jaw: the last of them are called Wisdom Teeth in man, from the fact that they do not appear until he is supposed to have attained years of discretion, namely, from the

eighteenth to the thirtieth years of his age. Next to these, on each side of both jaws, are two teeth whose surfaces are less broad, and which, having two sharp projections on each, are termed Bicuspids (two-pointed) (*b*). The sixth tooth on each side is the Eye Tooth (*c*); it has but one point or projection, hence these teeth have been called Cuspidata (pointed). From its large development in dogs, this has been called the Canine Tooth. Between these last on each side, coming in front of the mouth, we have four teeth which have neither the broad surface of the grinders, nor the point of the cuspidata; but they are flat, having a sharp edge like a knife; hence they have been called Incisors, or Cutting Teeth (*d*).

FIG. 41.



The above illustration (Fig. 41) exhibits more clearly than the foregoing, the peculiar form of the Molares, Bicuspids, and Cuspids, with their fangs or roots.

The above three sorts of teeth, which we may call grinders, tearers, and cutters, represent three classes of teeth among the lower animals; that man has them all we may take as an evidence that he is intended to be an omnivorous feeder.

Although the teeth form so prominent and distinguishing a feature of all the full-grown individuals of the higher forms of animals, yet most of these animals, including man, are born without any teeth at all. When the child is born, the jaw is covered with gums, but underneath the gums are little cavities in which the teeth are formed; and, as they go on growing, they at last press upon the gum, and causing it to absorb, finally break through it. This process is called *dentition*. It is frequently a source of disordered health to children, especially if anything occurs to prevent the absorption and ready yielding of the gum to the pressure of the tooth below. The absence of teeth during the period of human infancy evidently indicates that the food required at that period does not need their employment. It is a well-known fact that the food of the infant is its mother's milk; but it is too often forgotten that, till teeth are developed, Nature does not intend the child to take food that requires preparation by teeth in order to its digestion. The practice of feeding young children with solid food is the cause of great destruction of life; and even sops should only be sparingly administered, in cases of necessity, till the first teeth have appeared.

In the adult man there are thirty-two teeth; but if we

examine the jaw of a child after it has "cut" all its teeth, and before it is six years old, we shall find that it has but twenty. Nor are these teeth increased in number by the addition of others; but whilst this first set of teeth are performing their duties, an entirely new set is growing underneath them, in precisely the same way as they did at first. Gradually the fangs of the first set of teeth are absorbed, in consequence of the pressure of those beneath, and they fall out, or are easily removed, and make way for the others. The order in which the teeth appear, as well as the time, is subject to considerable deviations, but the following periods will be found to be about the time:—

FIRST, OR MILK TEETH.

2 lower middle incisors	4th to 8th month.
2 upper middle incisors	4th to 8th month.
4 lateral incisors	4th to 11th month.
4 anterior, or first molars	12th to 18th month.
4 eye, or canine teeth	16th to 22d month.
4 back molars	19th to 38th month.
20	

In some children the whole of the teeth may be cut by the end of the third year, whilst in others, the process of dentition may be prolonged to the fifth year.

ORDER OF APPEARANCE OF THE PERMANENT TEETH.

4 first molars, one on each of the two sides of the two jaws	6th to 7th year.
4 middle incisors, two in each jaw	7th to 8th year.
4 lateral incisors, a little later than the last	7th to 8th year.
4 first bicuspids	8th to 9th year.
4 last bicuspids	10th to 12th year.
4 eye, or canine teeth	11th to 13th year.
4 second molars	12th to 14th year.
4 back molars, or wisdom teeth	18th to 30th year.
32	

The internal structure of the teeth is very complicated. If we make a vertical section of a tooth with a fine saw, and after having polished it on a hard and smooth whetstone, submit it to an examination under the microscope, we shall easily make out the parts indicated in the cut. We shall discover that there are three very distinct portions. First, the enamel (in cut *a*), which covers the whole of the external part of the tooth; second, the dentine (*b*),—this substance, which is so largely developed in the tusks of the elephant and other pachydermatous animals, constitutes ivory; third, the cement (*c*) or bone, forming the external covering or facing of the tooth. In the middle of the tooth (*d*) is the pulp cavity. Into this cavity the nerves and blood-vessels of the tooth penetrate, and thus serve to maintain the living connection between the tooth and the rest of the body.

Each hard part of the tooth is differently formed. The enamel is by far the hardest of these structures, and is composed of dense semi-transparent fibres, placed side by side, and so small that they do not measure more than the five-thousandth part of an inch in diameter. These little fibres penetrate the dentine beneath. This substance is composed of two parts, namely, a number of very minute tubes anastomosing with each other, and an intertubular tissue. The tubes commence in the pulp-cavity, and pass on to the outside of the tooth. The intertubular substance is composed of very minute white granules or globules. The cement which covers the outside of the fang has a structure precisely like that of ordinary bone.

FIG. 42.



VERTICAL SECTION OF A TOOTH.

The teeth are inserted in—or rather, developed out of—the upper and lower jaws. The upper jaw is fixed, but the lower jaw has two round projections, which are inserted into cavities in the skull, in which they move with great facility. This movement is different in different animals. In those creatures which feed upon vegetable fibre, as it exists in the leaves and branches of plants, the jaw admits of a lateral motion, and the trituration and reduction of this kind of food is thus insured. On the other hand, in animals which partake of food that requires no bruising before it is carried into the stomach, this lateral movement would be of no use; hence, in the carnivora we find this action of the jaw confined to a simple up-and-down movement, by which the food is merely divided or cut into smaller pieces. When we examine the jaw of the human being, we find that it has a combination of these two movements,—that it combines the rotatory action of the ruminant with the up-and-down movement of the carnivora.

The Tongue.—The tongue is composed of muscular fibres, which are distributed in layers arranged in various directions. Between these fibres is a considerable quantity of adipose substance, and in the middle is a vertical septum of fibrous tissue. The tongue is connected behind with the os hyoides by muscular attachment, and to the epiglottis by the mucous membrane, which forms the three glosso-epiglottis folds called Fræna Epiglottidis. At either side it is held in connection

with the lower jaw by the mucous membrane; and in front a fold of that membrane, which is named Frænum Linguæ, is formed beneath its under surface. The tongue is covered by a dense layer, analogous to the corium of the skin, which gives support to the Papillæ. A Raphe marks the middle line of the tongue, and divides it into symmetrical halves.

FIG. 43.



THE TONGUE.

1, the raphe, which sometimes divides in two branches as in the figure; 2, 2, the lobes, the rounded eminences here and near the top being the *papillæ fungiformes*,—the smaller ones among which they are dispersed being the *papillæ conicæ* and *filiformis*; 3, tip of the tongue; 4, 4, its sides, on which are seen the lamellated and fringed papillæ; 5, 5, the A-shaped row of *papillæ circumvallata*; 6, the *foramen cæcum*; 7, mucous glands at the root of the tongue; 8, epiglottis with its frœna (9, 9); 10, 10, the greater cornua of the *os hyoides*.

The tongue, like the whole of the internal passages of the body, is covered with mucous membrane. This membrane, when examined, is found to be a continuation of the skin which covers the external surface of the body, and, like it, is composed of two principal parts,—a layer of fibres and vessels, covered above with cells. It is the condition of these superficial cells that constitutes the difference between the skin and mucous membrane. The first are always dry and hard, whilst the latter are soft, and covered with a fluid secretion, called mucus. This membrane covers the whole surface of the tongue, and is prolonged below, passing on either side of a mass of tissue under the tongue, which is called the Frænum, or string of the tongue. It is this part of the tongue which, being prolonged to an unusual extent along the floor of the mouth, constitutes the condition which is called "tongue-tied." It is very seldom indeed that this affection exists to an extent to require interference; but it is very often imagined to be present by officious nurses and anxious mothers, when the structure of the tongue is perfectly natural. It should, however, be known that occasionally so large a blood-vessel may be wounded in this proceeding as to produce alarming consequences on the system of a new-born babe.

Under the mucous membrane, and causing projections on its surface, lie the Papillæ of the tongue. These papillæ vary in size, but are very obvious to the naked eye when the tongue is put out. On examining them with the microscope, they are found to consist of blood-vessels and nerves. The nerves which

are sent to these little papillæ are not supplied from the same nerves which are furnished to the muscles in order to give them the power of movement, but from a special source; and the branch of the nerve which is thus supplied is called the *gustatory*, on account of its being the part of the nervous system which gives the special sense of taste. Through this organization, then, the tongue is not only enabled to assist in mastication, but it becomes the principal source of enjoyment in the taking of food that is agreeable to the taste.

The mucous membrane, as well as the form of the tongue, are liable to considerable changes in appearance, indicative of disordered states of the system. It is on this account that the tongue is so constantly examined by the medical man in diseases of the body. Its form and movements will often indicate the general state of the nervous and muscular systems; whilst the appearance of the surface is an index to the condition of the mucous membranes throughout the whole body.

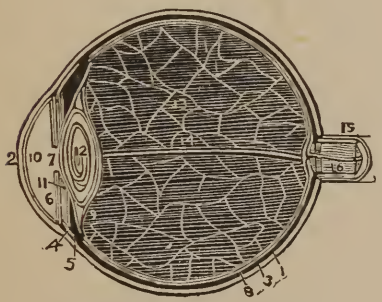
The Gums are the cellular and mucous membranes which cover the alveolar processes of the jaw before the growth of the teeth, the fangs of which they afterwards envelope.

The Eye.—The Eyeball, is a hollow globe, or small spherical chamber, about one inch in diameter, having the segment of a smaller sphere engrafted on its front surface. This is what we see projecting like a bow window, as it were, when we take a side view of the face. It is, in fact, the window of the chamber, and through it pass the rays of light which paint pictures on the retina within, of outward scenes and objects. In Fig. 44 this projection is very distinctly marked, giving to the sphere a frontal elongation. This globe is composed of investing tunics, three in number, and of refracting media, called humors, of which there are also three. The lines encircling this globe represent the tunics by which the humors are kept in their proper place.

Fig. 45 represents the Eyeball divested of its first tunic, so as to exhibit the second, with the beautiful distribution of the veins of the choroid, called venæ vorticosæ, from the peculiar manner of their arrangement. This is the external layer of the choroid, which is connected with the ciliary ligament. Next to it comes the middle or arterial layer, composed chiefly of the ramifications of minute arteries. It is called the tunica Ruyschiana, and is reflected towards its junction with the ciliary ligament, where it forms what are called the ciliary processes already spoken of. The internal layer of this tunic is called the membrano pigmenti, which is composed of several laminæ

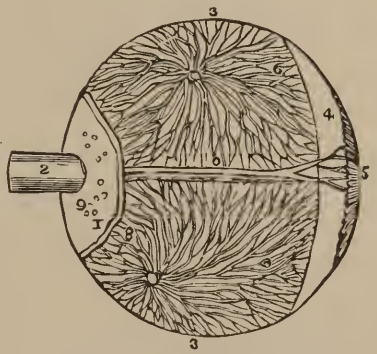
of minute six-sided cells, which are arranged like a tessellated pavement, and contain granules of pigmentum nigra, or black paint; this is not, however, quite black, but of a deep chocolate color. In Fig. 44 we see it in the dark line which encircles the globe, and thickens considerably towards the front.

FIG. 44.



LONGITUDINAL SECTION OF THE GLOBE OF THE EYE.

FIG. 45.



THE EYEBALL DIVESTED OF ITS FIRST TUNIC.

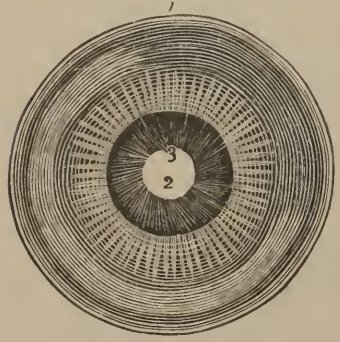
1 marks the course of the outer tunic, called the sclerotic, which invests four-fifths of the globe, and gives it its peculiar form. It is a dense fibrous membrane, thicker behind than in front, where it presents a bevelled edge, into which fits like a watch-glass the *cornea* (2), which invests the projecting portion of the globe, and is composed of four layers, viz., the *conjunctiva*, or *cornea propria*, consisting of thin lamellæ, or scales, connected by an extremely fine areolar tissue; the *cornea elastica*—an elastic and excessively transparent membrane, which lines the inner surface of the last; and the *lining membrane* of this front vestibule of the Eyeball, whose second tunic is formed by the *choroid* (3), represented by the dark line; the *ciliary ligament* (4), which developes from its inner surface the *ciliary processes*, and the *iris* (6), of which the opening at 7 represents the *pupil*. The third tunic, is the *retina* (8), which is carried forward to the *lens* (12), by the *zonula ciliaris*, a prolongation of its vascular layers passing along the front of the *Canal of Petit* (9), which entirely surrounds the lens. In the space marked 10, is contained the *aqueous humor;* 11 is the *posterior chamber;* 12, the *lens*, more convex behind than before, and enclosed in its proper capsule; 13 marks the inner area of the globe, filled with a thin membrane called the *hyaloid*, and containing the vitreous humor; 14 is the tubular sheath of the membrane, through which passes an artery connected with the capsule of the lens, and, at the back of the eye, with the optic nerve, as represented at 16. Of this nerve, 15 marks the *neurileuma*, or sheath.

1, part of the outer tunic, the sclerotic; 2, the optic nerve, communicating with the ball at the back; 3, 3, distinguish the outline of the choroid coat; 4, the ciliary ligament, a dense white structure which surrounds, like a broad ring, the circumference of the iris (5). This ligament serves as a bond of union between the external and middle tunics of the Eyeball, and serves to connect the cornea and sclerotica at their lines of junction with the iris and external layer of the choroid; 6, 6, mark the *venæ vorticosæ;* and 7, 7, the trunks of these veins at the point where they have pierced the sclerotica; 8, 8, the posterior ciliary veins, which enter the Eyeball in company with the posterior ciliary arteries, by piercing the sclerotica at 9. The course of one of the long ciliary nerves, accompanied by a vein, is marked by 10.

Our next diagram (Fig. 46) represents a front segment of a transverse section of the Globe of the Eye, and again exhibits that beautiful arrangement of parts for which this organ is so remarkable.

We have hitherto been looking upon this wondrous little globe from without. Let us now take a view of it from within, as represented in Fig. 47. This is a posterior segment of a

FIG. 46.



TRANSVERSE SECTION OF THE GLOBE OF THE EYE.

1, the divided edges of the three tissues, the *sclerotic* (outer), *choroid* (middle and dark), and *retina* (inner), which last is composed of three membranous layers, the external being serous, the middle nervous, and the internal vascular; 2, the *pupil*, that central spot, which enlarges or contracts, according as more or less light is required to be admitted; 3, the *iris*, so called from Iris, a rainbow, on account of its variety of color in different individuals. It is composed of an anterior muscular layer, consisting of radiating fibres, which, converging from the centre toward the circumference, have the power of dilating the pupil; and also of circular fibres, which, surrounding the pupil like a sphincter performs the duty of contracting its area. The posterior, or hinder layer, is of a deep purple tint, and is hence named *uvea*, from its resemblance to a ripe grape. This is the surface of the iris presented to view in the above section. 4, ciliary processes; 5, scalloped anterior border of the retina.

FIG. 47.



POSTERIOR SEGMENT OF A TRANSVERSE SECTION OF THE EYE.

1, the three outer tunics; 2, the entrance of the optic nerve, with the vein known as the *anteria centralis retinæ* piercing its centre; 4 is the *foramen of Soemmering*, situated in the middle of the axis of the eye. This is a circular spot, surrounded by a yellow halo, called the *limbus luteus*. This halo is commonly obscured by a fold of the retina (5).

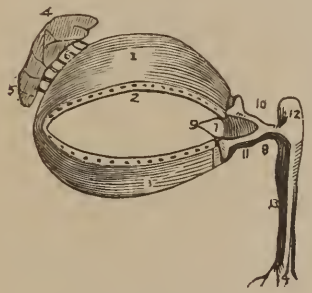
transverse section of the ball. Here again we see, of course, only the divided edges of the tunics on the three outer rings from which extends the membrane covering the whole internal surface of the retina. The foramen, which signifies an opening, has been found to exist only in animals which have the axes of the eyeballs parallel with each other, as man, the quadrumania, and some saurian reptiles.

The Lens, or crystalline humor, marked 12 in Fig. 44, is situated immediately behind the pupils, and surrounded by the ciliary processes which overlap its margin. It is less convex on the front than on the hinder surface, and is invested by a peculiarly transparent and elastic membrane called the Capsule, which contains a small quantity of fluid called the Liquor Morgani, and is retained in its place by its attachment to the

zonula ciliaris, already described as a prolongation of the vascular layer of the retina.

The lens consists of concentric layers formed upon a hard, firm nucleus, and becoming softer as they tend to the outer surface. These concentric lamellæ are composed of minute parallel

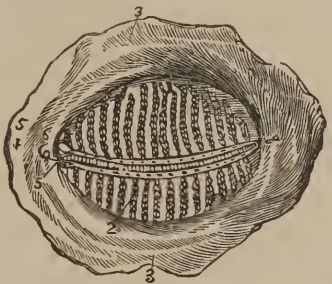
FIG. 48.



EYE-APPENDAGES.

1, the *superior* or upper *tarsal cartilage*, along the lower border of which (2) are seen the openings of the *Meibomian glands;* 3, the *inferior*, or lower, *tarsal cartilage*, along the upper edges of which are also openings of the above-named glands; 4, the superior or orbital portion of the *Lachrymal gland*, from which come tears; 5, its inferior or palpebral portion; 6, the *Lachrymal ducts*, or channels through which the tears pass to the outer surface of the eye; 7, the *Plica semilunaris*, containing a small plate of cartilage, which appears to be the rudiment of a third lid, such as is developed in some animals; 8, the *Caruncula lachrymalis*, the source of the whitish secretion which so constantly collects in the corner of the eye; it is covered with minute hairs, which can sometimes be seen without the aid of a microscope; 9, the *Puncta lachrymalis*, the point, or external commencement of the ducts, which terminate at the *lachrymal sac*, the position of which is marked by 12; as are the *superior* and *inferior lachrymal canals* by 10 and 11. The *nasal duct*, marked by 15, and 14 is its dilation with the lower meatus of the nose.

FIG. 49.



MEIBOMIAN GLANDS.

1, 2, the inner sides of the eyelids; 3, 3, the *Conjunctiva;* 4, the apertures of the glands, along each corner of the lids; 5, 5, 6, 6, the *Papillæ lachrymales* and the *Puncta lachrymalia;* 7, the apertures of the ducts of the *Lachrymal gland.*

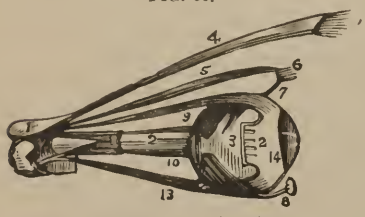
fibres united with each other by means of scalloped borders, the convexity of one body fitting into the concavity of the other.

Before leaving this part of our subject, we will give a brief summary of the *uses* of the several parts which we have been endeavoring to describe. The first tissue, the sclerotic, is simply one of protection; the cornea is a medium for the transmission of light; the choroid supports the vessels, such as veins and arteries, by which the eye receives nutriment; and also, by its inner layer of pigmentum nigrum, absorbs all scattered rays, by which an image impressed on the retina might be confused. The iris, by its power of expansion and contraction, regulates the quantity of light admitted through the pupil. If it be thin, and the rays pass through its substance they are absorbed by the uvea; and if the power of that layer be insuffi-

cient, they are taken up by the black pigment of the ciliary processes.

When the body of the refracting medium is too great, owing to over-convexity of the cornea and lens, the image falls short of the retina, unless the object be brought very close,—this is near-sight. When there is an opposite condition of things, so that the image is thrown beyond the nervous membrane, we have what is called far-sight.

FIG. 50.



MUSCLES OF THE EYE.

1, Sphenoid Bone; 2, the Optic Nerve; 3, the Globe of the Eye; 4, the Upper Muscle, called the *Levator Palpebræ*, the Lifter of the Eyelids: 5, the *Superior Oblique*, so called from the direction in which it draws the Eyeball; we see its cartilaginous pulley (6), and the reflected portion passing downward to its point of connection with the ball, beyond which the *Inferior Oblique* has its bony origin,—the point of which is marked by the little square knob. The other four muscles are called *Recti*, straight; the *Superior Rectus*, sometimes called the *Levator Oculi*, erector of the eyes, and sometimes *Superbus*, because its action gives an expression of pride; its opposite, 13, the *Inferior Rectus*, sometimes called *Deprimus oculi*, depressor of the eye, and *Humulis*, as giving an expression of humility; 10, the *Rectus Internus*, sometimes called *Adductor Oculi*, from its drawing the Eyeball toward the nose, and *Bibitorious*, a sort of punning name, in allusion to the cup, or orbit, towards which it directs the glance; 11 and 12, *Rectus Externus*, the one showing its two heads of origin, and the other its termination; the intervening portion of muscle [having been removed] has the name of *Abductor Oculi*, because it turns the ball outwards; *Indignabundus* is another name for it, as giving an expression of scorn. In our diagram, the internal rectus passes behind the optic nerve, which partly conceals it; 14, the *tunica albigania*, or white tunic, formed by the expansion of the tendons of the four *Recti muscles*.

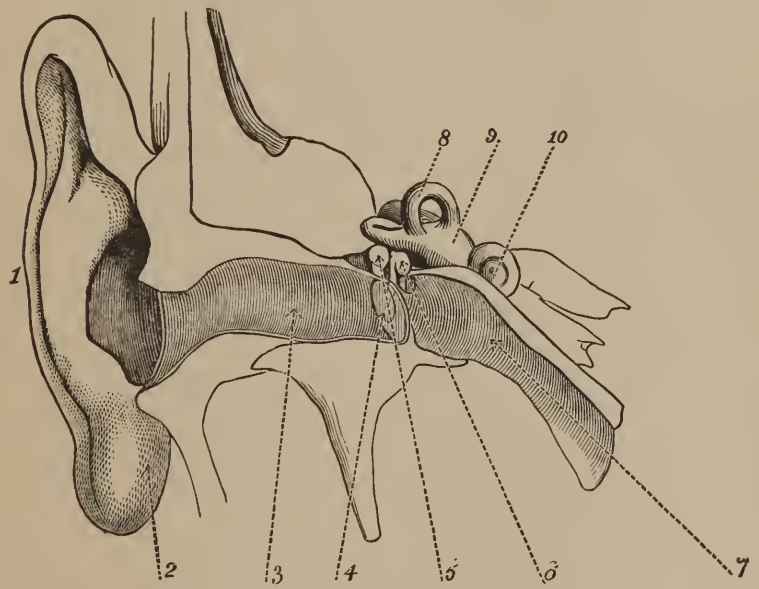
Of the various nerves, veins, and arteries, which traverse the eye, we need not attempt a description. To some of the principal of them allusion has already been made; but to the *appendages* we must devote a little space. These are, first, the Eyebrows (*supercilia*), two prominent arches of integument, covered more or less with thick short hairs, and forming the upper boundary of the orbits. Their obvious utility is to shade the eyes from too vivid a light, and to protect them from particles of dust and moisture from the forehead. Second, the Eyelids (*palpebræ*), which have been well called the Curtains of the Eyes; when drawn open, they leave an elliptical space sufficiently large for the purposes of sight, and when closed, as in sleep, they effectually defend the delicate organs which they cover from injury. If we inquire into the structure of these two valvular Eye-curtains, we find that they consist of integuments, muscles, cartilages, glands, and the mucous membrane called conjunctiva, which covers the whole of the anterior surface of the eye, and is reflected back so as to form the internal layer of the lids.

On examining the inner aspect of the Eyelids, the Meibomian Glands can be distinctly seen, arranged like strings of

pearls, about thirty, on the cartilage of the upper lid, and somewhat fewer in the lower, where also they are shorter than those above, as they correspond in length with the breadth of the cartilage. Each of these glands consists of a single lengthened follicle, or tube, into which a great number of small clustered glandular vesicles open; and from these tubes the secretion is poured out upon the margins of the lids, which, being thus kept constantly moist inside, are in a condition to lubricate and wash the surface of the cornea, which they do in the motion of winking.

The Eyelashes (*cilia*) are important organs of defence for the delicate surface of the eye, for whose curtains they form, as it were, a silken fringe.

FIG. 51.



1, pinna; 2, lobule; 3, tube; 4, tympanic membrane; 5, incus, or anvil; 6, malleus, or hammer; 7, Eustachian tube; 8, semicircular canals; 9, vestibule; 10, cochlea.

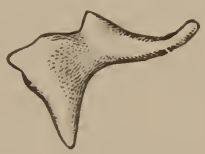
The Ear.—The Ear, the organ of hearing, consists of three parts,—the external ear, the middle ear or tympanum, and the internal ear or labyrinth. The external ear consists of an expanded trumpet-shaped cartilaginous structure, called the pinna, or auricle, which collects the sounds, and a tube which conveys these sounds to the internal ear. The pinna, or auricle, consists of an uneven piece of yellow cartilage, covered with integu-

ment, and fixed to the margin of the auditory canal. This canal, or tube by which sound is conveyed from the pinna to the internal ear, or tympanum, is about one and a quarter inches in length, and is formed partly by bone and partly by cartilage and membrane. Its direction is obliquely forwards and inwards, and is somewhat bent downwards towards the middle, so that it is rather higher there than at either extremity. The skin lining the auditory canal is very thin, and closely adherent to the cartilaginous and osseous portions of the tube. It is continued over the membrane of the tympanum in the form of a thin pellicle, forming its outer covering. Around the entrance of the *meatus* are some fine hairs; and there are also ceruminous glands, which secrete the ear-wax, and open on the surface by separate orifices.

The middle ear, tympanum, or drum of the ear, is an irregular cavity situated within the petrous bone, and interposed between the *meatus auditorius* and the labyrinth, or inner ear. It is filled with air, and communicates with the pharynx by the Eustachian tube. It is traversed by a chain of small movable bones, which connect the membrana tympani with the labyrinth, and serve to convey the vibrations communicated to the membrana tympani across the cavity of the tympanum to the internal ear. The outer boundary of the cavity is formed by the membrana tympani, and by a small portion of the surrounding bone. This membrane is a thin, semi-transparent substance, nearly oval in form, separating the cavity of the tympanum from the bottom of the auditory canal.

The Eustachian Tube is the channel through which air is conveyed from the pharynx to the tympanum. The small bones, or ossicles, of the tympanum are three in number,—the malleus, incus, and stapes. These small bones are connected

FIG. 52.



THE INCUS.

FIG. 53.



THE STAPES.

FIG. 54.



THE MALLEUS.

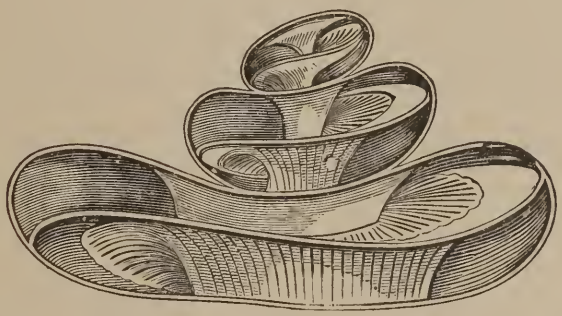
together, and with the tympanum, by ligaments, and moved by small muscles.

The inner and fundamental portion of the organ of hearing is called, from its complexity, the labyrinth, and consists of

three parts,—the vestibule, the semicircular canals, and the cochlea. It consists of a series of cavities channelled out of the substance of the petrous bone, communicating externally with the cavity of the tympanum, and internally with the meatus auditorius internus, which contains the auditory nerve. Within the osseous labyrinth is contained the membranous labyrinth, upon which the ramifications of the auditory nerve are distributed.

The Vestibule is the common central cavity of the osseous labyrinth, and is placed behind the cochlea, but in front of the semicircular canals. These are three bony canals, situated above and behind the vestibule, measuring about one-twentieth of an inch in diameter, and opening at both ends into the vestibule.

FIG. 55.

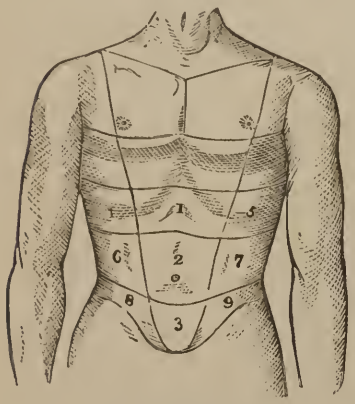


SECTION SHOWING THE HOLLOW OF THE COCHLEA.

The Cochlea, so called from its resemblance to a snail's shell, is conical in form, and placed almost horizontally in front of the vestibule. Its length is about a quarter of an inch, and its width at the base about the same. It consists of an axis, or centre; of a canal winding spirally round it for two turns and a half from the base to the apex; and of a delicate lamina contained within the canal, which follows its windings, and subdivides it into two passages. The whole inner surface of the labyrinth, including the semicircular canals and the passages of the cochlea, is lined with a thin fibrous membrane, the outer surface of which adheres closely to the bone, while the inner is covered with a single layer of epithelium, like that on serous membranes, and secretes a thin serous fluid. The auditory nerve, which is distributed over the different parts of the labyrinth, enters by the meatus auditorius internus, and divides into two branches, viz., an anterior for the cochlea and a posterior for the membranous labyrinth.

The Abdomen.—The Abdomen is the lower venter, or belly, containing the stomach, intestines, liver, spleen, pancreas, kidneys, &c. It is lined within by a membrane called the *peritoneum*, defended on either side by the short ribs, and covered with the abdominal muscles, which, by their relaxations and contractions, in the act of breathing, assist digestion, and give the necessary secretive and expulsive motions to the surrounding parts.

FIG. 56.

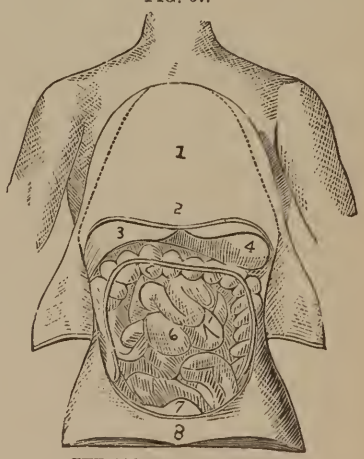


THE ABDOMEN.

1, the epigastric region; 2, the umbilical; 3, the hypogastric; 4, 5, the hypochondriac; 6, 7, the iliac; 8, 9, the inguinal.

The abdomen is bounded above by the midriff, or diaphragm; and below by the pelvic bones, forming the pelvic cavity, with which it communicates; at the front and sides are the abdominal muscles, which also extend backward to the vertebral column, or spine. This is the largest cavity of the human body, and, for convenience of description, it has been mapped out into three zones,—upper, middle, and lower,—and several parts, or regions.

FIG. 57.

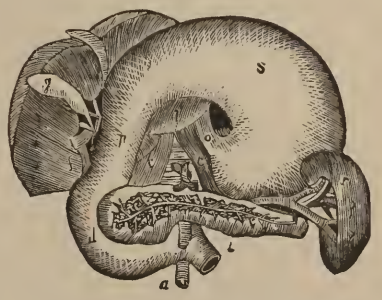


THE ABDOMINAL VISCERA.

The contents of the abdomen —or, as they would be more properly called, the abdominal viscera, this word being the plural of *viscus*, which means a bowel or any internal organ which has a specific use—are situated as shown in Fig. 57. Below the chest (1), and next to the diaphragm (2), is the liver (3), extending from beneath the right ribs across to the left, and having the largest development on the former side. Next to this is the stomach (4, the smaller end of which is situated in the epigastric, and the larger in the left hypochondriac region, where it comes in contact with the

spleen, or melt. Behind the stomach lies the pancreas, or sweetbread. In the middle zone lies the large bowel (5), the omentum or caul, with a portion of the small intestines (6); and behind these, close to the spine, are the kidneys. The small intestines also pass down the centre part of the inferior zone, as do laterally the ends of the large intestines, or colon; and there also we find, when it is distended, the upper portion of the bladder (7). Over all these viscera, covering and supporting them, extends the moist glistening membrane called the peritoneum, which extends also into what is called, in the male, the rectum, in the female the womb.

FIG. 58.



THE STOMACH AND SURROUNDING ORGANS.

l, the under-surface of the liver; *g*, the gall-bladder; *f*, the common bile duct; *o*, the cardiac end of the stomach; *s*, under surface of the stomach; *p*, pylorus; *d*, duodenum; *h*, *i*, the pancreas, cut across to exhibit the structure of the pancreatic duct, and its branches; *r*, the spleen; *c*, portion of the diaphragm; *a*, aorta.

The Stomach.—The stomach is the large membranous receptacle which receives the food from the œsophagus, and within which it is acted upon by the gastric juice and converted into chyme. It is situated in the left hypochondriac and epigastric regions, and when distended it has the shape of an irregular cone, having a rounded base and being curved upon itself. The left extremity is the larger, and is called the greater or splenic end of the stomach, —the right or small end being called the pyloric. The œsophagus terminates in the stomach two or three inches from the great extremity by the cardiac orifice; while by the pyloric orifice at the other end, the digested matter enters the duodenum. When moderately filled, the stomach is about ten or twelve inches in length, and its diameter at the widest part about four inches. The walls of the stomach consist of four distinct coats, held together by fine areolar tissue, and named, in order from without inwards—the serous, muscular, areolar, and mucous coats. The first of these is a thin, smooth, transparent, elastic membrane, derived from the peritoneum. The muscular coat is very thick, and composed of three sets of fibres—the longitudinal, circular, and oblique, which form three layers. The areolar and fibrous coat is a tolerably distinct layer, placed between the muscular and mucous coats, and connected with both. The last is a smooth, soft, rather thick and pulpy mem-

brane, loosely connected with the muscular coat, and covered with exhaling and inhaling vessels. At the pyloric orifice, leading from the stomach into the duodenum, there is a sphincter muscle which contracts the aperture and prevents the passage of any matter into the intestines until properly digested. The food is propelled along the œsophagus, and enters the stomach in successive waves through its cardiac orifice. It is then subjected to a peculiar peristaltic motion, having for its object to produce a thorough intermixture of the gastric fluid with the alimentary mass, and to separate that portion which has been sufficiently reduced from the remainder. This motion causes not only a constant agitation or churning of the contents, but also moves them slowly along from one extremity to the other. These revolutions are completed in from one to three minutes, being slower at first than after chymification has more advanced. The passage of the chyme or product of the gastric digestion through the pyloric orifice into the commencement of the intestinal tube is at first slow; but when the digestive process is nearly completed, it is transmitted in much larger quantities.

FIG. 59.

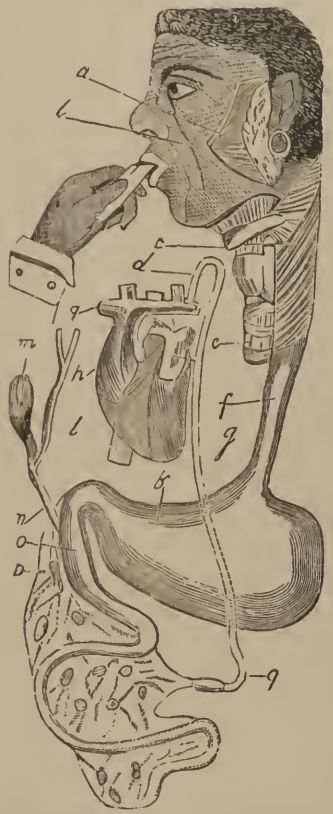


DIAGRAM OF THE PRINCIPAL ORGANS ENGAGED IN THE PREPARATION OF FOOD.

a, muscles of the cheek; *b*, parotid gland; *c*, muscles of the gullet; *d*, larynx; *e*, trachea; *f*, gullet; *g*, left ventricle of the heart; *h*, right auricle of the heart; *i*, left auricle; *k*, stomach; *l*, pancreatic duct; *m*, gall-bladder; *n*, common duct; *o*, duodenum; *p*, mesenteric glands; *q*, thoracic duct.

The Liver.—The liver is the secreting organ or gland by which the bile is formed. It is situated in the right hypochondriac and epigastric regions below the diaphragm, and is of a reddish-brown color. Its form is irregular, being convex on the upper surface, irregularly concave below, very thick behind, and very thin in

front; and in the adult it generally weighs from three to four pounds. It is divided into two principal lobes—the right and left, the former of which is by far the larger. They are divided on the upper side by a broad ligament, and below by a considerable depression, or fossa. Between and below these two

FIG. 60.



ORGANS OF DIGESTION.

a, œsophagus; *b*, diaphragm; *c*, stomach; *g*, duodenum; *h*, *i*, right and left lobe of the liver; *k*, gall-bladder; *l*, biliary duct; *m*, mesentery; *q*, ascending colon; *r*, *s*, *t*, transverse colon; *v*, rectum; *w*, bladder; *y*, spleen; *z*, left lung.

lobes is a smaller lobe, called *lobulus Spigelii*, which is bounded on the left by the fissure for the lodgment of the ductus venosus; on the right by the fissure for the vena cava. The *lobulus*

caudatus is a tail-like process of the liver, stretching downwards from the middle of the right lobe to the lobulus Spigelii. The liver, like the other viscera of the abdomen, receives an investment from the lining membrane of that cavity—the peri-

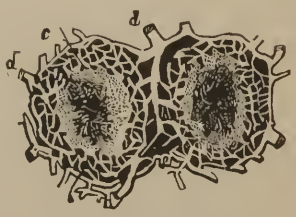
FIG. 61.



LOBUS OF THE LIVER SHOWING HEPATIC AND PORTAL VEINS.

p, branches of portal vein; *l*, capillaries connecting hepatic and portal veins; *h*, hepatic veins.

FIG. 62.



LOBULE SHOWING THE HEPATIC DUCTS.

d, *d*, the hepatic ducts; *b*, *b*, minute ramifications.

toneum, which, being reflected from it at different points, forms broad bands, connecting it with the surrounding parts. An investment of areolar tissue is also spread over the organ, extending into the interior, and forming thin but dense sheaths to the vessels and canals, called the capsule of Glisson. The proper tissue of the liver is composed of a great number of granular bodies, of the size of millet, and called lobules, of a foliated appearance. The blood-vessels of the liver are the hepatic artery and veins and the vena portæ. The liver receives two kinds of blood: arterial, for the nourishment of the gland; and venous, from which the bile is principally formed.

The secretion of bile, though the chief and most obvious of the functions of the liver, is not the only one which it has to perform; for recent discoveries have shown that important changes are effected in certain constituents of the blood, in its transit through this gland, whereby they are rendered more fit for their subsequent purposes in the animal economy. The excretory apparatus of the liver consists of the hepatic, common, and cystic ducts, and the gall-bladder.

The biliary ducts commence by small twigs in each lobule, and join, forming, where they emerge from the gland, the hepatic duct. This duct, after passing down for a short distance, is joined at an angle by the cystic duct from the gall-bladder. The common duct thus formed empties itself into the duodenum.

The retention of the materials of the bile in the blood acts

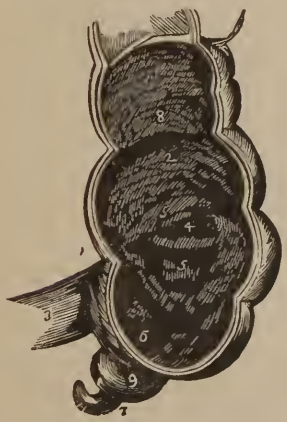
like a poison upon the nervous system, and if the suspension of secretion is complete, death soon takes place.

The Gall-Bladder.—The gall-bladder is an oblong membranous receptacle, situated on the concave side of the liver, under the right lobe. It is about the size of a small hen's egg, and resembles a pear in shape. It serves as a reservoir for the bile, which, when digestion is not going on, regurgitates through the cystic duct, and is retained for future use.

The Spleen.—The spleen is a spongy viscus, of a livid color, oval in figure, and situated in the left hypochondriac region, between the eleventh and twelfth false ribs. It is convex externally and concave internally, and its weight in the healthy adult is from four to ten ounces.

The Intestines.—The intestines are that part of the ali-

FIG. 63.



THE CÆCUM, WITH ITS APPENDIX, AND ENTRANCE OF THE ILEUM, AND ILEO-CÆCAL VALVE.

1, cæcum; 2, commencement of colon; 3, ileum; 4, aperture of entrance of the ileum into the large intestine; 5, 5, ileo-cæcal valve; 6, aperture of appendix vermiformis cæci; 7, appendix; 8, 8, sacculi of the colon, separated by valvular septa; 9, falciform frænum of the appendix.

FIG. 64.

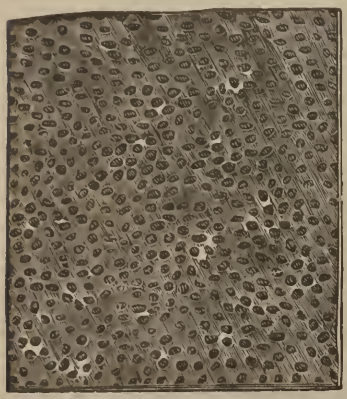


LONGITUDINAL SECTION OF A PORTION OF THE SMALL INTESTINE.

mentary canal which extends from the stomach to the anus, and is formed by a peritoneal, muscular, and mucous or viscous coat, united by cellular membrane. It is divided into small and large intestines,—the first of which has three divisions, severally distinguished as the Duodenum, or twelve-inch intestine, the membrane of whose inner surface presents a number of folds called valvulæ conniventes. This begins at the pylorus or lower surface of the

stomach; it bends first backwards, then downwards, and then across the body, being partially covered by the peritoneum. It then takes the name of Jejunum, so called from its being usually empty at this part. It then runs into the remaining portion called the Ileum, which takes its name from its mazy folds or convolutions. The small intestines open by the ileo-colic valve into the large intestines, which have also three divisions: first, the cæcum, or head of the colon, to which is attached the appendix vermiformis, a little blind bag. The colon, which constitutes almost the entire length of the large intestine, is termed as it ascends into the right lumbar region, the ascending colon; as it crosses the abdomen, the transverse arch of the colon; and as it descends in the left lumbar region, the descending colon.

FIG. 65.



VIEW OF THE FOLLICLES OF THE COLON, MAGNIFIED ABOUT 115 TIMES.

The termination of the large intestine is the rectum, or end of the alimentary canal,—so called because it is nearly in a right line. Here the covering called the peritoneum ceases, and the intestine accomodates itself to the hollow of the pelvis, having its external opening in the anus, the sphincter of which, a strong circular muscle, guards it.

The whole of the intestinal canal is a continuous tube about six times the length of the body, the first three-quarters of it comprising the small, and the last quarter the large intestines.

FIG. 66.



VIEW OF THE VILLI AND FOLLICLES OF THE ILEUM, HIGHLY MAGNIFIED.

In the mucous coat of the alimentary canal is to be found a cribriform texture of veins, almost without an artery. The fine venous trunks of a deeper layer have their originating

extremities directed vertically toward the cavity of the gut, and the meshes of the venous intertexture are exceedingly minute, producing in the colon an appearance resembling a plate of metal pierced with round holes closely bordering on each other. These holes are the follicles of Lieberkuhn, are gaping orifices, the edges of which are rounded off, and their depth is that of the thickness of the venous anastomosis. The aggregate number of these follicles in the colon, is estimated at nine millions six hundred and twenty thousand.

FIG. 67.



MESENTERIC CIRCULATION.

The villi (shown in Fig. 66) are curved, with their edges bent in, or concave; but there is, in the whole canal, every variety of shape, from oblong, curved, and serpentine ridges, to the laterally flattened cone standing on its base.

FIG. 68.



PAROTID GLAND OF A SHEEP, EXHIBITING THE BRANCHED AND LOBULATED CHARACTER OF THE GLANDS OF THE HUMAN STOMACH, AND OTHER PARTS.

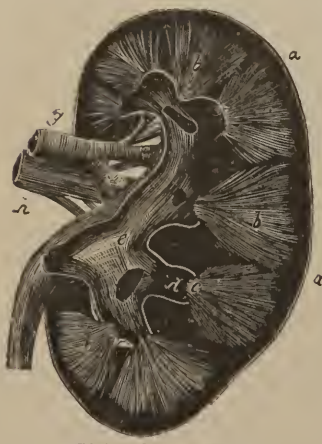
Fig. 67 shows a distended intestine, with its arteries, veins, and lymphatics, or lacteals, with three glands (5), through which the absorbed matter passes, and in which it is believed that it is vitalized.

The Pancreas.—The pancreas is a single glandular organ, situated transversely across the upper part of the abdomen. It is of an irregular elongated form, from six to eight inches in length, an inch and a half in breadth, and from half an inch to an inch thick. In structure, the pancreas closely resembles the salivary glands, but it is looser and softer in texture; and the fluid secreted is almost identical with saliva. Its object is believed to be to reduce fatty matters to the state

of an emulsion, and thereby promote their absorption by the lacteals. The amount daily secreted by man is from five to seven ounces, and it is most abundant at the commencement of digestion.

The Kidneys.—These are two glandular bodies situated in the lumbar region, whose office is to secrete the urine from the blood. Their exact position is on either side of the spine, in what is usually called the small of the back, where they lie imbedded in fat; each of them is supplied with blood by vessels which issue directly from the aorta, and from each of them issues a duct called the ureter, which conveys the urine to the bladder. The kidneys are composed of two very different structural arrangements—the outer, or cortical portion being, as it were, granulated, and the inner being fibrous, arranged in pyramids or cones, with their bases resting upon the cortical substance, and their apices or points opening into a central cavity—the pelvis, or, as it has been called, the brain of the kidney, which may be regarded as an expansion of the upper portion of the ureter, which is about the diameter of a goose quill, and eighteen inches long, passing behind the bladder, and entering that organ at its lower part.

FIG. 69.



SECTION OF A KIDNEY.

Each kidney together forms a firm, fleshy mass, which is enclosed in a fibrous capsule, the outer and tougher membrane being lined with a soft and smooth mucous membrane which forms a continuation of that which lines the ureter and the bladder; the shape is about that of a French bean.

The Urine is a highly complex fluid, secreted from the blood by the kidneys. In a healthy person, when recently voided, it is a clear, limpid fluid, of a pale yellow or amber color, with a peculiar faint aromatic odor, which becomes pungent and ammoniacal when decomposition takes place. Often, however, as it cools, it becomes opaque and turbid, from the deposition of part of its constituents previously held in solution; and this may be consistent with health. The quantity secreted in twenty-four hours depends upon the amount of

fluid drank and the quantity secreted by the skin; but generally it is about from thirty to forty fluid ounces. In 1000 parts of ordinary urine there are 933 parts of water and 67 parts of solid matter.

The Bladder is a thin membranous bag which serves as a receptacle for the urine secreted by the kidneys, until it is voided through the urethra. It is situated in the pelvis, and is kept in its place by ligaments, which are usually divided into true and false, the latter being formed of folds of the peritoneum. It is composed of three coats, or membranes,—the external, or fibrous membrane; the middle, or muscular membrane; and the internal, or mucous membrane. On each side, rather below its middle, it receives the two ducts called ureters, which convey the urine from the kidneys into the bladder.

FIG. 70.



THE URINARY BLADDER, SHOWING ITS MUSCULAR FIBRES

8, Left Ureter; 9, Left portion of Seminal Vesicles; 11, 11, Lateral Lobes of the Prostate Gland; 14, Urethra, tied with a cord.

Generative Organs.—In the human race, as throughout the greater part of the animal kingdom, generation is accomplished by fecundation, or the effect of the vivifying fluid provided by one class of organs upon the germ contained in the seed or ovum formed by another class, in the opposite sex. This germ, when fecundated, is termed the embryo. The process consists of impregnation in the male—conception in the female.

The organs of generation in the male are—1. The testes and their envelopes, namely, the scrotum or cutaneous envelope; the dartos, which corrugates or ridges the scrotum; and the fibrous or vaginal tunics; we must also here include the epidermis, above the testes; the vas deferens, or excretory duct, and the spermatic chord. 2. Vesiculæ seminales, forming a canal situated beneath the bladder. 3. The prostate gland, surrounding the neck of the bladder and the commencement of the urethra. 4. Cowper's glands, a pair situated below the prostate. 5. The ejaculatory ducts. 6. The penis, which consists of the corpus cavernosum, the urethra, the corpus spongiosum, which terminates in the glans penis; then there are the vessels, nerves, and a cutaneous investment, which by its prolongation forms the prepuce.

The female organs are: 1. The vulva or pubendum, the external parts, comprehending the labia pubendi (lip), the clitoris, situated at the middle and superior part of the pubendum; the nymphæ or alæ minores; the urethra, which terminates in the meatus urinarius, opening into the vagina, which is occupied by the hymen, a semilunar fold, or the carunculæ myrtiformis, its lacerated remains after the first act of copulation; and the entrance into the vagina, termed the os externum, so called to distinguish it from the os internum, or orifice of—2. The uterus, whose appendages are—the ligamenta lata (the broad ligaments), sometimes called alæ vespertilionum, and the round ligaments commencing immediately before and below the Fallopian tubes, which extend to the ovaria.

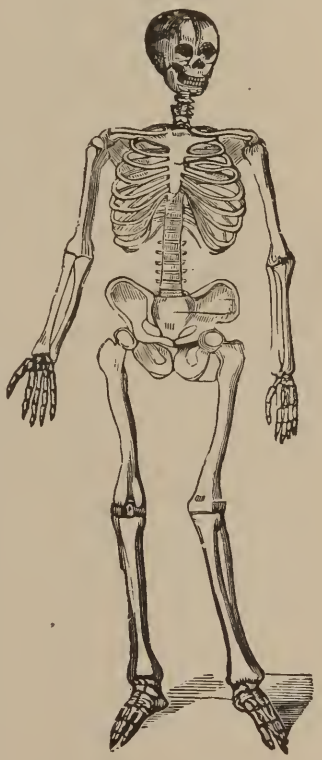
The Perinæum.—The space between the anus and the external parts of the generative organs, so called from being frequently moist. The operation of cutting for stone in males is usually performed here, and here it is that serious injury sometimes occurs, when persons fall with their legs astride of any object, or get a bruise while in that position, as on horseback; bloody urine, or complete stoppage may be the consequence, arising from inflammation of the bladder, or urethra. Rest and warm fomentations, with leeches, and the use of the catheter, if necessary, must in this case be resorted to; with low diet, aperients, and cooling medicines, to keep down any tendency to fever there may be.

We abstain from giving cuts of these several parts and organs for sufficiently obvious reasons; in a book intended for family use they would be altogether objectionable. With regard to the diseases which more immediately affect them, a few simple remarks will be made under their several heads; but we would here impress upon our readers the necessity of at once seeking medical advice for all affections of the genital organs. It is in the treatment of this peculiar class of diseases that advertising empirics reap their richest harvest, entailing the greatest present sufferings, and most fearful after-consequences upon their too credulous dupes.

The Bones.—The number of bones in the human body is variable; but in the adult they are reckoned at about two hundred and forty-four. They are equally divided into long, flat, and irregular—long, as in the thigh and leg; flat, as in the skull and pelvis; irregular, as in the hands and feet. Bones are covered with a peculiar membrane, called the periosteum, which serves to conduct the blood vessels and nerves. The osseous skeleton is divided into head, trunk, upper and lower extremi-

ties. The trunk is divided into the spine, thorax, and pelvis. The thorax contains the principal organs of circulation and respiration, and is the largest of the three great cavities connected with the spine, and is formed by the sternum and costal cartilages in front, the twelve ribs on each side, and the dorsal vertebræ behind. The sternum is a flat, narrow bone, situated in the anterior part of the thorax, and connected with the ribs by means of the costal cartilages. The ribs are twenty-four in number, twelve on each side. The pelvis, or lower cavity of the trunk, consists of four bones. The os coccygis, which forms the terminal bone of the spine, is sometimes regarded, like the os sacrum, as composed of four false vertebræ, which are at first distinct, but afterward become united. The ossa innominata are two irregularly-shaped bones, situated one on each side of the pelvis, and consisting of three parts—the ilium, ischium, and pubis, firmly united in the adult, but distinct in the young subject. Each of the two upper extremities is composed of the bones of the arm, the forearm, and the hand, and is united to the trunk by means of the scapula and clavicle, which form the shoulder. The scapula is a flat, triangularly-shaped bone, placed upon the upper and back part of the thorax. The clavicle, or collar bone, is a long bone, something in the form of the italic letter *f*. The arm has only one bone, the os humeri, which extends from the scapula to the bones of the forearm. The forearm consists of two bones, the radius and ulna, which are parallel, and play upon each other, thus admitting of freer motion in that part. The radius is situate on the outer side of the forearm. Its upper end is small, and forms only a small part of the elbow joint, while its lower extremity is large, and forms the chief part of the wrist joint. The ulna is placed at the inner side of

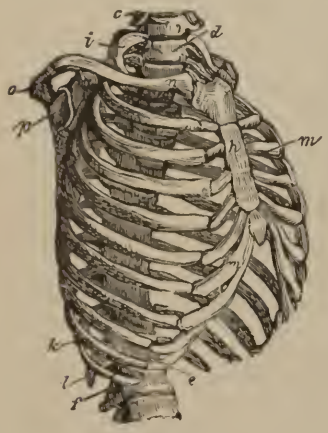
FIG. 71.



THE HUMAN SKELETON.

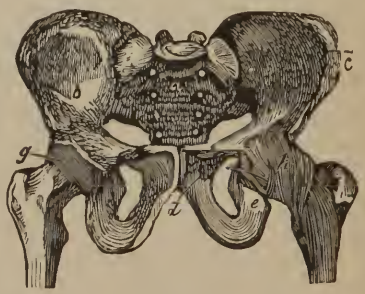
the forearm, and differs from the radius in being larger at the upper than at the lower extremity. The bones of the hand are divided into the carpus, the metacarpus, and phalanges. The bones of the carpus, or wrist, are eight small bones, arranged in two rows, the upper row comprising the scaphoid, semilunar, cuneiform, and pisiform; the lower row comprising the trapezium, trapezoid, os magnum, and unciform. The metacarpal bones, or bones of the palm, are five in number, and correspond to the fingers. The phalanges, or bones of the fingers, are fourteen in number, each finger, with the exception of the thumb (which has only two), having three of them. The upper and lower extremities bear a great resemblance to each other in the nature and form of their bones. Like the upper, each of the lower extremities consists of three distinct parts—the thigh, leg, and foot. The thigh is composed of a single bone—the os femur,—which is the longest and largest in the body. The leg consists of three bones—the patella, tibia, and fibula. The patella, or knee-pan, is a small, flat, triangular bone, of a spongy texture, situated at the anterior part of the knee-joint, between the femur and the tibia. The tibia and fibula in the leg resemble the radius and the ulna in the forearm: the tibia is, after the femur, the largest bone in the body. It is situate at the anterior and inner side of the leg, articulating with the femur above and the astragalus below. The fibula is considerably smaller than the tibia. Its upper extremity is small, and placed below the level of the knee-joint, but the lower extremity projects below the tibia, and forms the outer ankle. The foot, like the hand, is

FIG. 72.



THE THORAX.

FIG. 73.

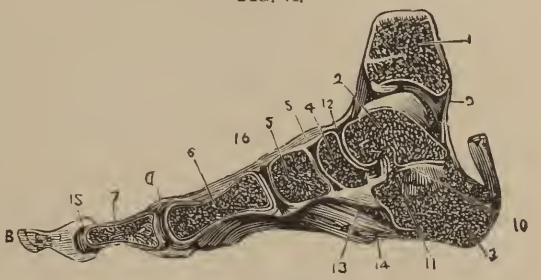


THE PELVIS.

a, os sacrum; *b*, the Ilíac; *c*, fossæ, forming the lateral boundaries of the false pelvis; *g*, the acetabulum; *d*, os pubis; *e*, Ischium; *f*, tuberosity of the ischium.

composed of three classes of bones—the tarsus, the metatarsus, and the phalanges. The tarsus is composed of seven bones. The metatarsal bones are long small bones, five in number, connected at the one extremity with the tarsal, at the other with the phalangeal bones: these last go to form the toes, each of which has three, except the great toe, which has only two.

FIG. 74.



VERTICAL SECTION OF THE ANKLE-JOINT AND FOOT OF THE RIGHT SIDE,

showing the formation of joints, the synovial capsules, and ligaments. The references are not given, as difficult and needless to remember.

The different bones of the skeleton are connected together in various ways, and such conections are termed articulations. They are of various kinds, but are usually divided into immovable, movable, and mixed. Immovable articulations exist where flat and broad bones are united to inclose important organs, as in the cranium and pelvis. In some parts the edges indent or interlock each other; in others they are brought into close contact, or are united together by a thin layer of cartilage. The movable articulations are of various kinds, according to the kind of motion required. In such cases, the bony surfaces brought into contact are covered with cartilage, bound together by ligaments, and lined by synovial membrane. Mixed articulation prevails where only a slight degree of motion is required, combined with great strength, as in the vertebræ.

Bone is a highly organized and complex substance. It consists of animal and earthy, and saline materials, in the proportion of about one-third of the former to two-thirds of the latter; or, to speak more strictly, according to chemical analysis, we may say that in 100·00 parts there are 33·30 of cartilage and blood-vessels, 51·04 phosphate of lime, 11·30 carbonate of lime, 2·00 fluate of lime, and 2·36 magnesia and soda.

In the human frame the bones are of various forms and degrees of density, or hardness. Thus, in the limbs, they are hollow cylinders, combining lightness with strength; in the body and head they are chiefly flattened and arched, forming cases for the internal viscera; in the spine and extremities, they

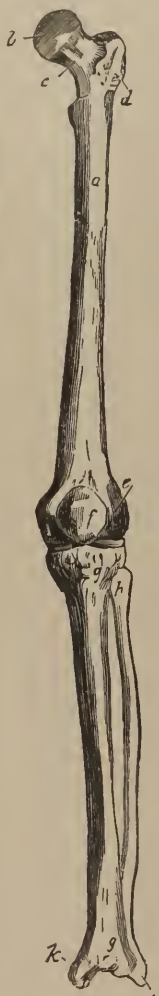
are in many pieces, to facilitate the bending of the numerous joints. Their connections with each other are accomplished and preserved in many ways. In all bones, whether hollow or solid, the outer portion is harder than the inner; many of them are spongy, or, as it is scientifically termed, *cancellated*, and most of them have minute irregular cells scattered through their texture. At those extremities, where a smooth and elastic substance is required for the joints, most bones have a covering of *cartilage*. Bones are first developed in a gelatinous form, which hardens into cartilage, and then receives the deposit of lime, by which they are rendered firm; sometimes there is a deficiency of the earthy deposit, and thus the bones are bent and yielding. When there is too much lime the bones are too brittle and easily broken. One of the principal diseases to which the bones are subject is *Caries*. It acts on the periosteum like ulceration on the soft parts of the body. Another disease of the bones is *Necrosis*. It is, as its name implies, actual death of the osseous substance. Both these diseases are characterized by a constant gnawing pain in the bone. Swelling and redness over the seat of the disease ensues; there is a formation of matter and a discharge of a foul, fœtid character, communicating a dark stain

FIG. 75.



BONES OF THE ARM.

FIG. 76.



BONES OF THE LEG.

FIG. 77.



BONES OF THE FOOT.

to the dressings. Several openings in the skin may occur along the course of the diseased bone, of which occasionally small pieces may come away with the discharge.

Many minute blood-vessels pass into and through the porous tissues of the bones, and hence they are liable to *inflammation* and *congestion*, both acute and chronic, resulting in softening, and ulceration or mortification, passing thus into *caries* and *necrosis*. That which is commonly called a *White Swelling* is a result of chronic inflammation. It ends in caries of the spongy texture of the ends of the bone, and destruction of their cartilaginous lining. *Abscess of bone* sometimes results from inflammation, and especially after acute disease, such as small-pox. A prominent symptom is a fixed pain in one spot, in addition to inflammatory enlargement.

Exfoliation is the death of the outer bony layer only. It is generally caused by some injury to the bone from a blow or a graze, or the amputating-knife. In this case the shell dies, and is replaced by fresh osseous matter coming up from beneath by granulations pushing the dead bone from its place in thin flakes or exfoliations.

The Muscles.—The muscles are the moving organs of the animal frame. They constitute, by their size and number, the great bulk of the body, upon which they bestow form and symmetry. In the limbs, they are situated around the bone, which they invest and defend, while they form to some of the joints a

FIG. 78.

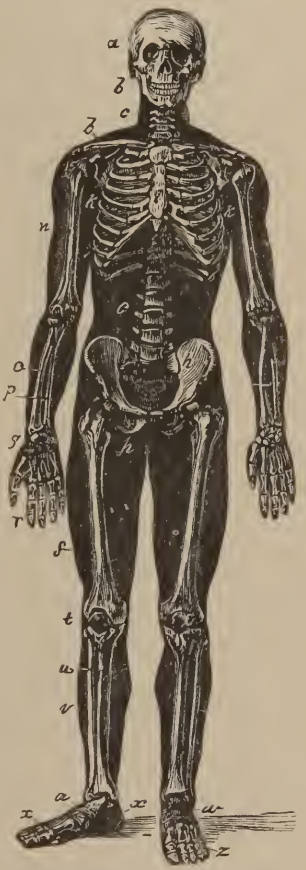


DIAGRAM SHOWING THE RELATION OF THE BONES TO THE FLESH.

a, The Skull; *b*, the Face; *c*, Cervical Vertebræ, or Neck-Bones; *d*, Breast Vertigo; *e*, Lumbar Vertebræ, or Spine; *f*, Os Sacrum, or Rump-Bone; *g*, Coccyx; *h*, Ilium, or Haunch-Bone; *i*, Sternum, or Breast Bone; *k*, Ribs; *l*, Clavicle, or Collar-Bone; *m*, Scapula, or Blade-Bone; *n*, Humerus, or Arm-Bone; *o*, Radius, or Circular-Bone of Forearm; *p*, Ulna, or large Bone of the Forearm; *q*, Carpus, or Hand-Bones; *r*, Phalanges, or Fingers; *s*, Femur, or Thigh-Bone; *t*, Patella, or Knee-bone; *u*, Tibia, or Shin-Bone; *v*, Fibula, or Small Bone of the Leg; *u*, *w*, Tarsus, or Foot Bone; *x*, Calcium, or Heel-Bone; *z*, *z*, Phalanges, or Toes.

principal protection. In the trunk, they are spread out to enclose cavities and constitute a defensive wall, capable of yielding to internal pressures and again returning to its original position.

FIG. 79.



THE MUSCULAR SYSTEM.

a, Muscles of the Head; *b*, Visual Muscles; *c*, Cervical Muscles; *d*, Combination of the Cervical Muscles; *e*, Pectoral Muscles; *f*, Dorsal Muscles; *g*, Abdominal Muscles; *h*, Muscles of the Pelvis; *i*, Shoulder Muscles; *l*, Muscles of the Upper Arm; *m*, Anterior Muscles of the Forearm.

Muscle is composed of a number of parallel fibres placed side by side, and supported and held together by a delicate web of areolar tissue; so that, if it were possible to remove the muscular substance, we should have remaining a beautiful reticular framework, possessing the exact form and size of the muscle, without its color and solidity. Towards the extremity of the organ the muscular fibre ceases, and the fibrous structure becomes aggregated and modified, so as to constitute those glistening fibres and cords by which the muscle is tied to the surface of bone, and which are called *tendons*. Almost every muscle of the body is connected with bone, either by tendinous fibres, or by an aggregation of these fibres constituting a tendon, and the union is so firm, that, under extreme violence, the bone itself breaks rather than permit the separation of the tendon from its attachment.

It may be interesting, as well as useful, to enter a little more fully into the structure of muscle, which, as before stated, is composed of bundles of fibres enclosed in an investment or sheath of areolar membrane, which is continuous with the framework of the muscular fibres, each bundle of which, termed a *fasciculus*, is composed of a number of smaller bundles, and these of single fibres, which, from their minute size, and independent appearance,

have been called ultimate fibres; although microscopic examination informs us that each one of these is itself a fasciculus, made up of ultimate *fibrils* enclosed in an extremely delicate sheath, called the *myolemma* or *sarcolemma*. The appearance of one of these bundles of fibrils, as magnified, is shown in Fig. 80.

FIG. 80.



MUSCULAR FIBRILS.

Of the ultimate muscular fibre there are two sorts in the animal economy, viz., that of voluntary or animal life, called striated muscle, and that of involuntary or organic life, termed smooth muscle. The former is known by its size, its uniformity of calibre, and especially by its transverse markings, which occur at minute and regular distances. It also presents markings, or striæ, in a longitudinal direction, which indicate the existence of fibrillæ within the sheath, or myolemma, which is thin, transparent, and elastic. The ultimate fibres, or fasciculi, are polyhedral, or many sided, in shape, this form being due to mutual pressure; and that the sizes differ in different classes, genera, and even sexes of animals. The ultimate fibrils of animal life are beaded filaments, presenting a regular succession of segments and constrictions, the latter being narrower than the former, and the component substance probably less dense. The arrangement of a bundle of these fibrils in an ultimate fibre, is such that all the segments and constrictions correspond, and in this manner give rise to the alternate light and dark lines of the transverse striæ. The beautiful regularity of this arrangement may be seen by Fig. 81, in which B represents the ultimate *fibril* of animal life, and C the union of such in an ultimate *fibre*.

We have mentioned that the ultimate fibril of animal life, although cylindrical, becomes polyhedral from pressure, when forming part of an ultimate fibre, or fasciculus. It measures in diameter 1–2000th of an inch, and is composed of a succession of cells connected by thin flat surfaces. These cells are filled with a transparent substance which has been called *myoline*. It differs in density in different cells, and this circumstance imparts a peculiarity of character to certain of them, and causes the structures which they form to assume, under the microscope, a very beautiful and remarkable appearance, such as is represented in Fig. 82.

FIG. 81.

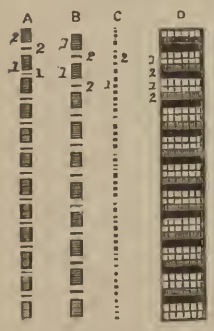


FIBRE. FIBRIL.

Very different from all this in its form and arrangement, is the ultimate fibre of organic life, it being a simple homogeneous filament much smaller than the fibre of animal life,—flat, smooth,

and without transverse markings. It is of a fusiform shape, and various length, and consists of a thin external membrane, blended with a soft, homogenous, or finely granular contained substance. Fig. 83 represents muscular fibres of organic life—D from the urinary bladder, and E from the stomach, both magnified 600 times, linear measure; the diameter of these two fibres midway between the thick parts, or nuclei, being 1-4750th of an inch.

FIG. 82.



FIBRILS AND FIBRES.

This kind of muscle is distributed very abundantly in the animal frame, and is met with in all situations where a distinct contractile power, independent of mere elasticity, is required.

The Arteries are vessels which convey the blood from the heart,—formerly supposed, from their being found empty after death to contain only air. The arterial system of the human frame is that which performs one of the most important functions on which vitality depends. Proceeding directly from the heart, and ramifying in every direction, through all the various tissues of the body, it conveys the blood, after it has received a supply of oxygen from the lungs, and been passed into the great organ with which the arteries are connected, wheresoever it is required for the purposes of life. These arteries are membranous cylindrical tubes, composed of three coats, and are so constructed as to be capable of considerable extension, and likewise of bearing a great amount of strain and pressure, to which they are occasionally subjected, and which results sometimes in a rupture.

FIG. 83.

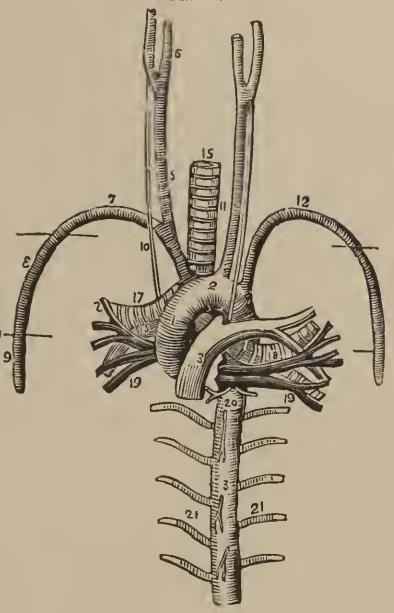


MUSCULAR FIBRES.

The whole of the arteries of what is called the *systemic* circulation, proceed from a single trunk termed the *aorta*. This main trunk or channel proceeds from the left ventricle of the heart, and contains the pure arterial blood, known by its bright red color, and issuing, when it makes its escape at any accidental opening, in jets, in accordance with the pulsations. From these the smaller arteries are given off as branches, dividing and subdividing to their ultimate ramifications, constituting the great arterial tree, of some of the principal branches of which, we here present our readers with a cut, which represents the large vessels at the root of the heart and lungs. It is necessary

here to refer to the minute explanation of the figured points of figure 84.

FIG. 84.



THE ARTERIAL SYSTEM.

1, The ascending *aorta;* 2, the transverse portion of the arch of the same; 3, its thoracic portion, passing through the chest; 4, the *arteria innominata* springing out of the arch, and divided into the common *carotid;* 5, which again divides at 6, into the external and internal carotid, and 7 the right *subclavian* artery, which passes into the *auxiliary* artery 8, whose extent is indicated by the dotted lines; this again runs into the *brachial* artery, which forms the channel of supply to the right arm. The two lines [illegible] are a pair of nerves called the right an[illegible] left *pneumogastric;* 11 is the left com[illegible]on *carotid,* and 12 the left *subclavian,* becoming auxiliary and brachial in its course, like its fellow on the opposite side; all these belong to the greater *systemic circulation,* as do also 21, *intercostal* arteries, and the branches from the front of the aorta above and below 3, which are *pericardine* and æsophagial, pertaining to the pericardium and the æsophagus, and abdomen.

We now go back on the diagram to No. 3, the trunk of the pulmonary artery, which emanating from the right ventricle of the heart conveys the impure blood, returned there by the veins to the lungs for aeration. This is the main channel of the lesser or pulmonary circulation, it is connected with the concavity of the arch of the aorta by a fibrous cord, called the *ductus arteriosus.*

14, the left pulmonary artery, and 15 the right; 16 the trachea, or windpipe, the passage which communicates with the lungs, will serve to show the relative positions of these arteries; 17 and 18 are the right and left bronchus, and 19 are the pulmonary veins; the rest of the numbers indicate the roots of the lungs.

The arteries do not, as was at one time supposed, run immediately into the veins, but are connected with them by what are called the capillaries, a hair-like network of vessels so minute that it requires a microscope to make them out; these are, it is said, about 1–3000th of an inch in diameter, and they are distributed through every part of the body so thickly as to render it impossible to pass a small needle into the flesh without wounding several of them; hence the flow of blood from a prick; it is through this medium that all the phenomena of nutrition and secretion are performed; they are all small alike, and are joined on the one hand with the terminal ramifications of the arteries, and on the other with the minute radicles of the Veins.

The capillary vessels have but one coat, which is transparent

and fibreless; as they approach the arteries and veins this coat becomes thicker, and, in accordance with the substance thereof, they are distinguished as fine or coarse; the latter gradually

FIG. 85.



ARTERY FROM THE BRAIN.

1. Minute artery. 2. Transitional capillary. 3. Coarse capillary, the thick coat being represented by the double lines of contour. 4. Fine capillary, the black marks indicate the position of certain nuclei dispersed over the inner surfaces of capillaries, transitional vessels, arteries and veins constituting in the two latter the epithitial layer of the inner coat.

FIG. 86.



THE SUPERIOR MESENTERIC ARTERY.

A, is the descending portion of the Duodenum; B, is a transverse section of the same; C, the Pancreas; D, Jejunum; E, Ilium; F, Coecum, and Appendix Vermiformis; G, Ascending Colon; H, Transverse Colon; I, Descending Colon; J, Superior Mesenteric Artery; K, Colica Media; L, the branch which Inosculates (or joins by little mouths) with the Colica Sinistra; M, Inferior Pancreatic Duodenum; N, Colica Dextra; O, Ilio Colica; P, Vasa Intestini Tenous.

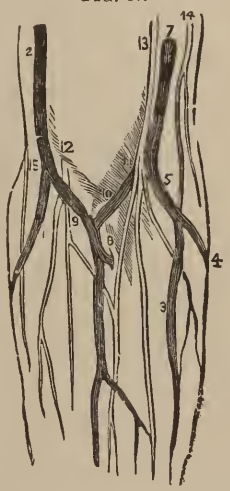
augmenting in size and complexity of structure become what are called transitional vessels.

The capillaries are most abundant in the lungs, liver, kidneys, and other secreting glands, also in the skin, and mucus membrane; and they are smallest and least abundant in the muscles, nerves, organs of sense, and those tissues where nutrition only is to be accomplished; they are large in the bones, but not numerous, interweaving, as in many parts they do, into a minute network called a Plexus. The extreme beauty of arterial arrangement will be best exhibited by Fig. 86, showing the course and distribution of the Superior Mesenteric Artery.

A particular description of all the several arteries could scarcely be looked for in a work like the present. It has

already been seen that they are very numerous, although we have alluded to but few of them comparatively; some of them lie deep amid the internal viscera; others, as the femoral, passing down the thigh, the temporal, which traverses the forehead, the carotid, in the neck, and the bronchial, and other arteries of the arm, which are most likely to be wounded in the act of venesection, come very near to the surface, in some cases protected from injury only by the loose ariolo-fibrous investment which separates all arteries from the surrounding tissues.

FIG. 87.



THE PRINCIPAL VEINS IN THE FOREARM AND BEND OF THE ELBOW.

1, the Radial Vein; 2, the Cephalic; 3, the Anterior Ulnar; 4, the Posterior Ulnar; 5, the Trunk, formed by their union; 6, the Basilic, which at 7 penetrates the deep fascia; 8, point of communication between the deep veins of the forearm and the upper part of the Median; 9, Median Cephalic; 10, Median Basilic; 11, a convexity of the deep fascia, formed by the Brachial Artery; 12, External Cutaneous Nerve, which pierces the deep fascia, and dividing into two branches, passes behind the Median Cephalic Vein; 13, Internal Cutaneous Nerve, dividing into branches, and passing in front of the Median Basilic; 14, Intercosto Humeral Nerve; 15, Spiral Cutaneous Nerve.

The Veins.—These are the vessels which return the blood to the auricles of the heart, after it has been circulated by the arteries through the various tissues of the body. They are much thinner in substance than the arteries, so that when emptied of their blood they are flattened and collapsed.

Arteries are the channels through which blood passes from the heart to the various parts of the body. Veins are the channels by which it returns to that organ, and to the lungs, to be purified, and again rendered fit for its vital purposes. These two different channels of circulation do not communicate directly with each other, but are connected by the minute branches which they each throw out, and which are called capillaries. These ramify all through the extremities, and all over the surface of the body, conveying arterial and taking up venous blood, which is passed into the smaller veins, thence into the larger, and so proceeds upward to the great fountain from which it set out, constantly receiving fresh accessions from the tributary veins which pour into the main channels on every side. Veins admit of a threefold division—into superficial, deep, and sinuses.

Superficial Veins return the blood from the integument and superficial structures, and take their course between the layers

of the upper fascia. They then pierce the deep fascia, in the most convenient and protected situation, and terminate in the

Deep Veins, which are situated among the deeper structures of the body, and generally in close proximity with arteries. In the limbs they are enclosed in the same sheath with these vessels: these return the blood from the capillaries of the deep tissues.

Sinuses differ from these veins in their structure, and also in their mode of distribution, being confined to special organs, and situated within their substances.

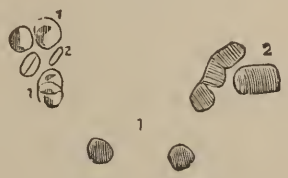
One very remarkable feature of veins is their numerous *valves*, which are composed of a thin stratum of nucleated areolar tissue mingled with fine elastic fibres, and coated on the two surfaces with fine elongated cells. The segments, or flaps, of these valves are semi-lunar in form, and arranged in pairs, one on either side of the vessel generally, but sometimes there is a single flap which has a spiral direction, and occasionally there are three. The free border of the valvular flaps is concave, and directly forwards, so that while the current of blood is permitted to flow freely towards the heart, the valves are distended and the current intercepted, if the stream from fullness of the veins above, or other causes, should turn back. When we consider that the course of the venous current is upward, and so opposed to the law of gravitation, we shall see at once the wisdom of such an arrangement. On page 31 will be found a cut of a valve of the heart, which will give a good idea of the general conformation of those of the veins. In those of the extremities, particularly the deeper ones, they are most numerous. In the portal and cerebral, and very small veins, and those of the viscera, they are generally absent, and altogether so in the large trunks.

The Glands.—A gland is an organ of the body, in which secretion is carried on, and which consists of a congerie of blood-vessels, nerves, and absorbents.

There are two primary divisions under which the glands are commonly placed. These are—First, those employed in secreting some particular fluid for the use of the body, such as the *Liver*, which secretes bile, and purifies the blood; the *Kidneys*, which secrete urine; and the *Salivary Glands*, which secrete the saliva. Second, the *Absorbent Glands*, and vessels whose office is to carry off the waste materials of the machine. The *Pancreas* and the *Spleen* should also be placed in the first of these divisions, although their peculiar offices in the animal economy is somewhat obscure.

The Blood.—The blood is a red fluid circulating through the heart, arteries, and veins of animal bodies, serving for the nourishment of all their parts, and the support of life. This nutritive fluid consists, firstly, of water, holding, in a dissolved condition, fibrine, albumen, potassium, and sodium, together with phosphoric acid and other substances; secondly, of corpuscles, or globules, which float in the *liquor sanguinis*. When drawn from the body, the blood undergoes a remarkable change. By degrees it gelatinizes, and forms spontaneously coagulum and serum. Coagulum consists of the fibrine and the corpuscles; serum, of water, albumen, and the various saline matters. The corpuscles are of two kinds—red and white, the red being the more numerous.

FIG. 88.



CORPUSCLES OF THE BLOOD.

1, 2, 1, Blood Corpuscles, as seen on their flat surface and edge; 2, Congeries of Blood Corpuscles in columns. In coagulating, the Corpuscles apply themselves to each other, so as to refemble piles of money. 1 (below), Blood Globules, or Cells, containing smaller cells, which are set free by the dissolution of the containing cell.

Blood is termed arterial or venous, according to the vessel in which it circulates. Arterial blood is a florid red, with a stronger odor and less specific gravity than the venous fluid. Venous blood is of a dark purple. The scarlet, or arterial blood, which is one degree warmer than venous blood, owes its color to its undergoing contact with atmospheric air in the lungs. It circulates in the pulmonary veins, the left cavities of the heart, and the arteries, by which it is distributed to the different organs throughout the body. The dark purple blood circulates in the veins, in the right cavities of the heart, the pulmonary artery, and the lungs. There is, again, a difference between arterial and venous blood in respect to the gases which they contain. The first holds a supply of oxygen; the second is rendered impure by the carbonic acid with which it is loaded.

Blood is the product of the elaboration of chyle, and acquires its nutritive and life-giving qualities in respiration. By means of the arterial vessels it penetrates to all the organs, distributing nutrition to every organic tissue. It is, moreover, the principal source of animal heat; from it, also, the secretive organs derive their various products, such as saliva, bile, urine, &c. The average quantity of blood in an adult man has been calculated at twenty-eight pounds, or pints. It has been shown that the composition of the blood undergoes a change in various diseases; and, after repeated bleedings, the number of corpuscles becomes permanently diminished. The color, as

well as the composition of the blood, varies in different sections of the animal kingdom: red in the vertebrates and annelides; white and transparent as water in insects and crustaceans; bluish-white in mollusca; yellowish in holothurians and some other invertebrates. This difference in color arises from the corpuscles, which are in some cases red, and in others white or straw-colored, or bluish-white.

The chemical constituents of blood, when in a healthy condition, are—albumen, fibrin, hæmatin or coloring matter, oleic, stearic, lactic, phosphoric, sulphuric, and hydrochloric acids, in combination with soda, potash, ammonia, lime, magnesia, and a small portion of phosphorized fat. The blood also contains oxygen, nitrogen, and carbonic acid. In considering the chemical constitution of the blood, it may be regarded as consisting of two parts—the *liquor sanguinis* and the blood corpuscles floating therein. The *liquor sanguinis* is composed of serum, holding a very small quantity of fibrin in solution. Taking the blood as a whole, Liebig gives its component parts as water, 80; solid matter, 20.

The solid matter, on being incinerated, gives $1\frac{1}{4}$ to $1\frac{1}{2}$ per cent. of ash, which consists of one-half sea-salt, one-tenth of peroxide of iron, and the rest of lime, magnesia, potash, soda, phosphoric acid, and carbonic acid.

The Skin.—Although apparently very simple in its structure, the skin is nevertheless a very compound organ; and when we consider the important functions it performs, and its relations to the rest of the body, we shall not be surprised at this. It is not only the seat of common sensation, but by means of the vapor it constantly emits in the form of perspiration, it becomes the great regulator of the heat of the body. For these purposes it is supplied with nerves, blood-vessels, and glands.

On examining a portion of skin from the palm of the hand, or sole of the foot, from without inwards, we find that externally it presents a number of furrows, or lines, which are tolerably constant in particular parts of the body. On the elevations between these lines are seen a number of minute openings (*b b*) which are the terminations of the glands (*d d d*) that yield perspiration. These furrows and pores are in the upper layer of the skin, called epidermis (*c c*) or scarf skin. This membrane is in some parts very thin, not exceeding the one two-hundred-and-fortieth part of an inch in thickness, whilst in others, as in the sole of the foot and the palm of the hand, it is at least one-twelfth of an inch thick. It is this portion of

the skin which is elevated when what are called blisters are formed. When examined with the microscope, it is found to consist of minute flat cells, which have been formed below, and are gradually thrust upwards. Below this, but for the most part continuous with it, is another series of layers of cells (*c c*),

FIG. 89.

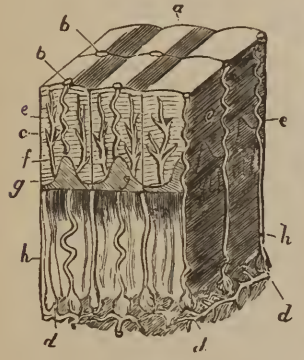
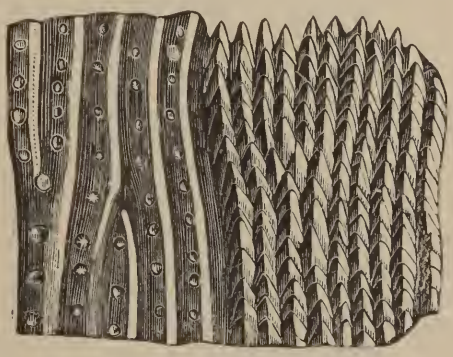


DIAGRAM OF THE STRUCTURE OF THE SKIN.

a, Epidermis; *b b*, Pores; *c c*, Layers of epidermis and rete mucosum; *f*, Inhalent vessels; *g g*, Papillæ of the skin; *h h*, Corium or true skin; *d d d*, Bulbs of sudoriferous glands opening in the glands *b b*.

FIG. 90.



PORES AND PAPILLÆ OF THE SKIN.

On the left is a Magnified View of the Ridges of the Cuticle, as seen in the Palm of the Hand, with the Openings of the Pores in their Furrows. On the right, the Cuticle has been removed, leaving corresponding rows of Papillæ.

and which were called, at one time, by the name *rete mucosum*, as it was supposed to be a separate membrane. The real nature of these layers of cells is, that they are all secreted on the surface of a tough fibro-vascular membrane, called the *corium* or true skin (*h h*). The cells of the lower layer, called the rete mucosum, are softer and much less compressed than those which form the epidermis. It is amongst these cells that a certain set are found which are termed pigment cells. When separated they have a very distinct form, and are easily distinguished from all the other cells by their dark color. This dark color is dependent on the presence, in the cells, of a number of flat, rounded, or oval granules, not more than the one twenty-thousandth of an inch in diameter. Now it is found that these cells are always present in the skin of the dark-colored races of mankind, and also in those parts of the skin of fair races which are of a dark color. It is, then, to the presence or absence of these cells that the skin is indebted for its white or black color. Where they are very abundant, the skin has a black color; and

in proportion to their diminution are the various shades called red, yellow, brown, brunette, which are observed amongst the various races of mankind. The skin is provided with two distinct sets of glands. One is destined to free the blood of a large quantity of fluid, and are named the perspiratory or sweat

FIG. 91.



A SWEAT GLAND.

A vertical section of the sole of the foot—*a*, the Cuticle or Scarf Skin, the deeper layers of which, dark in color, being called the *rete mucosum*; *b*, the *Papillæ*; *c*, the *Cutis* or True Skin; and *d* is the Sweat Gland in a cavity of oily globules.

FIG. 92.



VERTICAL SECTION OF THE SKIN LARGELY MAGNIFIED.

h, Sweat Gland; *i*, a Hair enclosed in its Follicles, and showing its pair of Sebaceous Glands; *p*, a Sebaceous Gland.

glands; the other being designed to draw off a considerable amount of solid matter, and are styled sebaceous or oil glands. The watery vapor which is constantly passing off through the pores of the skin—when not, as is commonly the case, in such quantity as to be noticed—is termed *insensible perspiration*; when so profuse as to collect in drops on the surface, it is *sensible perspiration* or *sweat*. The fluid which thus passes off from the system consists chiefly of water, with a small proportion of muriate of soda and free acetic acid; the quantity is at all times very considerable, but is greatly increased during violent exer-

cise, or in hot weather. The sweat gland possesses a twisted duct which passes upward to the surface, and through this tube ascends to the surface the perspiration, sensible and insensible. It is calculated that there are no less than twenty-eight miles of this tubing on the surface of the human body, and that, on an average, from two to three pounds of water daily reach the surface through these channels, and is evaporated. It is supposed that at least one hundred grains of effete nitrogenous matter are daily thrown off from the skin. If this excretion be checked or arrested, it throws additional labor on the kidneys; if it remains in the blood, it will prove fatal to life and health. Great attention, therefore, should be given to the functions of the skin, so as to keep the pores open and its action free; and for this purpose nothing is so efficacious as bathing in cold water, followed by friction and exercise.

Beside this beautiful arrangement for the perspiration, the skin is provided with another set of special organs, named sebaceous glands, whose office it is to withdraw a peculiar fatty matter from the system, while the secretion itself prevents the skin from being dried and cracked by the influence of the sun and air. These glands are distributed more or less closely over the whole surface of the body, but are most numerous in those parts which are largely supplied with hair, such as the scalp and face, and are thickly distributed about the entrances of the various passages into the body, as the anus, nose, lips, and external ear. They are altogether absent in the palms of the hands and the soles of the feet; they appear to be made up of an aggregate of small vesicles, and these small vessels are filled with an opaque white substance, something like soft ointment. These glands are overspread with minute capillaries or blood-vessels, and their ducts open either in the surface of the skin, or, which is more usual, directly into the follicle of the hair. These hair-follicles, into which the sebaceous glands open, are, in fact, among the secretory organs of the skin, since it is only at their root or lowest part that the material produced from their walls is appropriated to the growth of hair. All the rest goes to anoint the hairs and the surface of the skin. Hence it is that this secretion is much more abundant in the inhabitants of tropical climates than in those which inhabit cold countries. But for this benevolent provision of the great Creator, the skin would become parched and dry; and even with this provision of nature, the natives of the warm countries are in the habit of lubricating their skin with vegetable oils of various kinds, to protect it from the scorching influence of the solar rays.

THE CONDITIONS OF HEALTH.

Before treating of disease and its remedies, we will give a brief summary of the rules of health, by the observance of which disease may in a vast number of cases be prevented.

If it be asked what is meant by the term "health," it would be apparently easy to answer; but there is no one who will not find that it is as difficult a question as can be asked. This difficulty arises in a great measure from the term being a relative one. Such a state of body as would be considered health in one person might not be so in another, and in some cases it would be disease. Some men may consider themselves healthy when the doctor knew they were in disease; whilst some may consider themselves in disease when the doctor knew they were in good health. The true idea of health is a perfectly sound mind in a perfectly sound body—*mens sana in corpore sano*, as is the well-known Latin saying. A man's body must be right, and his mind and soul must be right, or he is not a healthy man. One of the first conditions of health is to have suitable food. Our bodies are made up of certain substances, which under their different functions are constantly worn out; so that being during our whole lives in a constant waste there must be a regular supply of food to replace this waste. Men do not eat simply to satisfy appetite. The object of taking food is to keep up the original size, &c., of the body, and to replace the waste. The animal body is a warm body, and is constantly emitting heat, and the heat so emitted must be replaced. The animal body has often been compared to a locomotive, in which by food, air, and water, heat is generated. Food may be considered as the fuel, but it does not serve to generate heat only, as in the locomotive, but to form new particles for the growth of the body, and to replace those worn out. Whilst in the engine the machine is constantly wearing out, the body, up to a certain time, by means of its fuel, is constantly replacing the waste, and even serving for the increase of the body. And here is seen the superiority of God's arrangements over those of men. All the different articles of food may be reduced to two great groups; —1st, flesh-forming substances; and 2d, heat-forming substances. The flesh of men and animals showed a third class of nutritive substances, known as nutritive salts. These salts have only begun to be fully recognized during the last few

years. These salts may be seen in the form of ashes when any food is burned—such as salt, phosphoric acid, potash, &c. The flesh-forming substances are required to form the flesh and muscles, the heat-forming substances to supply fat, which may be considered as the storehouse of heat; and the salts for the bones. Good food must contain a certain amount of flesh-forming substances, heat substances, and nutritive salts. It was popularly stated that a certain weight of eggs was equal to the same weight of flesh-meat, but it has long been known that eggs are not equal to meat. With flesh meat a carnivorous animal may support life, but it is not so with eggs. A dog may eat eggs but cannot digest them. If it can digest them it cannot live upon them. This is because the parts of the egg eaten do not contain an atom of nutritive salts. If we must eat eggs for the full nutriment we must eat the shell also. The contents of an egg when being hatched have not one particle of salts in them, yet when the chick comes forth it comes forth with the due proportion of phosphate of lime, as in men. This is due to the fact that the contents of the shell are able to dissolve the inner portion of the shell, and build it up into bones, and thus at the same time get the shell ready to break. There was a great argument a few years ago as to how the chick got out of the shell. True, the beak is so arranged at a certain point as to be ready to break the shell, but with all its power a chick cannot break the shell but for the removal of the inner portion of the shell to build up its bones. It is much the same with meat—if soaked in water it becomes useless; hence the value of salt. In salting meat 15 per cent of the nutritive parts are taken up with the brine, and salted pork is far more nutritive than raw or boiled ham. It is well known that a man dying of starvation cannot satisfy himself with boiled ham. It can be eaten and enjoyed, but that is because other things are taken along with it. Raw meats, and especially pork, should not be eaten, because they contain germs which become tape-worms. Pork, if eaten raw, is often positively poisonous. By the judicious mixing of the nutritive salts, different kinds of food which want them are good. It is this mixing of food which makes porridge and milk furnish perfect nutriment even for an adult. It is a pity the custom of eating porridge and milk is dying out, for it is as good a food for keeping up the substance, the animal heat, and strength as anything that could be eaten. It is also an ascertained fact that a dog if fed upon white bread, dies, whereas his health does not suffer at all if he is fed on brown bread. The reason of this is that in dressing the white bread

a certain necessary portion is taken away. What is true of the dog is true also of the man. In dressing white flour the bran is taken away. How many more men can be fed upon brown bread than if fed upon white at present in this country? At least a million. We are wasting the produce of the earth to the extent of at least one-thirtieth by not using the bran in the bread. There is not a child who, if it had taken brown bread for a time, but would prefer it. This is a natural instinct, and these instincts are given for a wise purpose. God has so arranged it that our natural instincts lead us to select such a class of food as is fit for the body. Milk contains, out of 100 parts, $4\frac{1}{2}$ of flesh-forming substances, 8 parts of heat-giving substances, and the rest is a little mineral and water. Milk is a perfect type of natural food, but only for children. Butchers' meat contains 22 parts of flesh-forming substance, 14 of the heat-giving principle, $\frac{1}{2}$ of mineral salts, and the rest water. Bacon contains only 8 of the flesh-forming substance, but 62 of the heat-giving principle. The relative proportions of fish are respectively 14 flesh-forming, 7 heat-giving, 1 mineral salts, 78 water; flour, 17 flesh-forming and 66 heat-giving—it consisting mainly of starch, which is an essential to the heat-giving principle; oat meal, 13 flesh-forming, 70 heat-giving, 3 mineral salts; potatoes, one flesh-forming, 22 heat-giving, as it consists, like flour, mainly of starch and water. Sugar has not a particle of the flesh-forming ingredient, but consists entirely of the heat-giving principle. Bread has 6 flesh forming, 38 heat-giving, $1\frac{1}{2}$ mineral salts, and 48 water; cheese 31 flesh-forming, 25 heat-giving, 4 mineral salts. In beer there is not actually one part of flesh-forming principle, and only 9 of the heat-giving out of 100 parts. It is almost entirely water. The flesh-forming foods are characterized by containing nitrogen, and the heat-giving by containing carbon—flesh-forming containing a predominance of nitrogen, and the heat-giving a predominance of carbon. From these facts we can easily estimate the relative value of different kinds of food for sustaining the body. In a case of illness these facts guide medical men. If a man is suffering from inflammation, and has been a great eater, they do not give him flesh-forming foods, but the other kinds to let him burn it off. Milk is the standard, and to every hundred parts of nitrogen in human milk, cow's milk contains 237 parts. Milk is intended for the nourishment of persons only in a state of quietude, such as babies. The practice of letting babies sit up before they can well do so—and having something of everything on the table, is not a wise one, but a

a very ruinous one. Milk should be given—and that alone—to a child until it gets its teeth. Another question regarding food is if, when taken, it can be digested. One kind might be very nutritious, but might be inferior to another with not so much nourishment in it. Suppose a man were to take some highly nourishing food, but after he had taken it could not digest it, it is of no more value than others which were not so nourishing but which could be digested. Indeed it is worse, if they made the stomach do twice the work for half the value. There is a great difference in the digestibility of food. Rice boiled soft, digested in an hour; apples, sweet and ripe, 1½ hours; sago, 1¾ hours to two hours; milk, 2 hours; cabbage, 2 hours; parsnips, 2½ hours; roasted potatoes, 2½ hours; boiled potatoes, 3½ hours; carrots, 3½ hours; butter and bread, 3½ hours; venision, 1½ hours; oysters, 2 hours and 3 minutes; raw eggs, the same; soft boiled, 3 hours; hard boiled, 3½ hours; salt beef, 5½ hours; mutton, 3 hours; pork, 3½ hours; salted pork, 4 hours and 38 minutes, &c. Not only must food be of a proper quality and such as could be digested, but care must be taken that it be cooked in the proper manner. Many articles are spoiled by improper cookery; and many a good cook will improve an inferior article. The French peasant lives on an amount of food which would astonish many, for the way in which they dress it and mix it up makes it go a long way. We actually use more food than we need to do, and it is wasted in the system, for it is given to the stomach in such a way that the stomach can not use it. Another point is to take care that no portion of the strength of the meat is wasted in the cooking. Not one person out of 500 knows how to make beef-tea or boil a leg of mutton. If they put beef for beef-tea into boiling water they will be sure to leave a great deal of the nutriment in the meat, and of course so much the less in the tea. When people want to get all the strength out of the beef, they should take a piece of lean meat, mince it fine, and put it into cold water, and afterwards gradually heat the water to boiling pitch, but by no means do this quickly. If they want boiled mutton to be juicy, they must put it into boiling water, which will have the effect of coagulating the albumen, and the water will be nothing but water. Another important matter is the amount of food to be taken. This ought to be considered by the amount of work a man has to perform. The amount of food must also vary according to the climate. Foods containing fat are required for winter, and containing starch for summer. In India it is almost necessary to live on rice, in Lapland the people have to eat an enormous

amount of fat to keep up the warmth of the body. People should always remember that they ought to eat to live, and not live to eat, as too many seem to do. More than half the inhabitants of this country do not remember this maxim. It is therefore better to get up from the table with an appetite, than to feel you cannot take any more. Some systems need more than others, but natural instincts must guide a man on this head. There is almost as much disease caused by intemperance in eating as in regard to drinking. Food taken into the system and not wanted is an incubus, and the system in trying to get rid of it is often diseased. It is an old saying, that good eating requires good rest, and it is true; hence the importance of not taking active exercise of body or mind after the principal meal of the day. Food when taken into the stomach requires an extra amount of blood to digest it, and if we indulge in reading the blood is taken away. There should be a good breakfast, a little food eaten in the middle of the day, and a good feed when the work is done. There is much truth in the saying—

After dinner sit a while;
After supper walk a mile.

The supper should be light. Long fasting is objectionable. The food should also be well masticated, and for this purpose teeth were given to us. Food imperfectly masticated takes a long time to digest, and putrifies in the stomach, tainting the breath. Hence the importance of having artificial teeth when our natural ones are gone, for there can be no doubt that modern dentistry has lengthened the average duration of life in this country. Then as to suitable drinks. It is evident from the natural constitution of our bodies, and the very abundant supply, that God intended our drink should consist mainly of water. Everybody is agreed as to the suitability of water as a drink, but everybody is not agreed as to whether it should be taken alone or with something in it. In all nations yet discovered, some kinds of artificial stimulants are used. Some are less injurious than others, but all or any of them taken to excess are injurious to both body and mind. In moderation at least some of them are useful, such as tea after a hard day's work. A cup of tea is far more refreshing than a glass of spirits or wine. Perhaps a safe rule is for persons to take those articles which do not intoxicate at their own discretion, such as tea or coffee, &c., whilst those which are intoxicating should not be taken except under judicious advice. It must never be forgotten that good wholesome food is the corn, whilst stimulants are only the whip. Another important condition of health is plenty of fresh air.

Air is as necessary to existence as food, and its total deprivation is still more rapidly fatal; but the quality of the air is also of nearly equal importance, though this is not so readily proved. Nevertheless, it is an admitted fact that pure air, uncontaminated either by decomposing animal, vegetable, or mineral products, is of the greatest consequence to the human race.

Whatever renders the blood impure tends to originate consumption. Whatever makes the air impure makes the blood impure. It is the air we breathe which purifies the blood. And as if the water we use to wash our clothing is dirty, it is impossible to wash the clothing clean, so if the air we breathe is impure, it is impossible for us to abstract the impurities from the blood.

What, then, are some of the more prominent things which render the air impure? It is the nature of still water to become impure. Running water purifies itself. Air in motion, draughts of air, are self-purifiers. Thus it is that the air of a close room becomes inevitably impure. Thus it is that close rooms cause consumption in countless thousands. Hence all rooms should be constructed as to have a constant draught of air passing through them.

A man of ordinary size renders a hogshead of air unfit for breathing, and consumes its blood purifying qualities every hour. Hence, sleeping in close rooms, even though alone or sitting for a very short time in a crowded vehicle, or among a large assembly, is perfectly corrupting to the blood. Close bedrooms makes the graves of multitudes. The simple fact set forth by Dr. Arnott, long ago, that a canary bird suspended near the top of a curtained bedstead in which people are sleeping will generally be found dead in the morning, should be sufficient to show the danger of breathing a vitiated medium, and the necessity for providing a constant and ample supply of fresh air in our dwellings.

Impure air, however, cannot be seen; its effects are not immediate; and so it is allowed to kill its thousands annually.

A healthy, full-grown man respires about twenty times in a minute, and inhales in that period about 700 cubic inches of air.

Fresh air contains twenty-three per cent. of oxygen; by the process of respiration the oxygen is reduced to eleven per cent., and the carbonic acid is increased to rather more than eight per cent. Three-and-a-half per cent. of this gas renders air unfit to support life; and this will give some notion of the large quantity of air required for the healthful occupation of a building by a number of persons, especially of sleeping-rooms.

It is very important upon taking a house to consider well beforehand all the advantages or disadvantages connected with the proposed residence; for not only may the physical comfort of a family, but also its mental and moral well-being, be materially affected by the selection.

The primary advantage every home should possess is healthiness. Do not choose your house in a low, damp situation, however *cheap* it may apparently be: houses in such situations cannot be well drained, and the consequence is, that fever or cholera often prevails in such a locality. A house built on dry, gravelly soil, on rising ground, and where the drains are in good order, should be selected as being that in which health may be best preserved. The signs of damp are moulding of the walls, paper-hanging mouldy and peeling off, and moist floors. High and dry situations, with a free circulation of air, whether in towns or in the country, are proverbially healthy; whilst those which are low and damp, or surrounded by confined air, are the opposite.

A plentiful supply of pure water is indispensable both for drinking and cleansing; good health cannot be expected if impure water is drunk, and you cannot have comfort in a dirty house or in dirty linen. Therefore, let "cleanliness be next to godliness."

The signs of good water are, that it easily becomes hot or cold, that in summer it is cool, and in winter slightly lukewarm; that a drop dried on a clean cloth leaves no stain behind; it has likewise neither taste nor smell.

Another sign is, that pure water, when boiled, becomes hot and afterwards grows cold sooner than water impregnated with impure substances. Standing pools and wells are not unfrequently impure.

River water varies according to the soil over which it runs, the influence of the weather, &c., and though commonly drunk it is never pure.

Next to well and river water, rain water may be considered in the scale of preference.

The water most to be preferred is that which descends from mountains or lofty hills, through flints and sands, and rolls gently over a similar bed of rocks.

The selection of a temporary residence for invalids is a matter of great importance; for one class an elevated situation, and a dry bracing air, will be most proper; a sheltered residence, with a milder air, will be suitable for another; whilst the seaside may perhaps be preferable for a third.

Very much precious time is often lost, and real injury inflicted, from want of due care upon this head, and from persons acting upon their own ideas, or upon insufficient advice. The subject is too extensive to admit of profitable consideration in this little manual, and the decision respecting the climate, resort to which is likely to benefit each individual case, is so much a matter of judgment, and of such importance, that medical opinion ought always to be taken when change of climate is desirable.

Besides what has been said on the necessity of change of climate to those afflicted with organic diseases, a change of residence and scene may have beneficial influence on health. Those persons accustomed to sedentary pursuits in town, frequently derive adequate beneficial results by a short resort to a suburban district, or the seaside. The nervous system is braced by the change, and all the functions are brought into more vigorous play.

Ventilation is a primary consideration. It is not possible to have too much fresh air in the house, provided only an uncomfortable and chilly draught is not allowed to blow upon the body. Mischief from draught may be prevented by means of folding screens to turn it aside,

A house without back windows, or without chimneys in the sleeping-rooms, is by no means healthy; a free current of air must be allowed to pass through all the apartments often every day.

The warmer and stiller the air is, the more difficult it becomes to secure free ventilation through the inside of rooms. In the calm, hot nights of summer the windows of sleeping-rooms should, on this account be left partly open. It is better to breathe air moistened with night dew than it is to breathe air impregnated with poisonous vapors.

The upper part of a room (supposing it to be badly venti lated, or not ventilated at all), is always filled with foul air, which keeps on increasing until it is breathed by persons who are in the room, to the prejudice of their health. The openings for the escape of foul air should be made as near the ceiling as possible. Fresh air finds its way into a room at the lower part, and if openings for ventilation are made in the upper part, a stream of air fit for breathing is always passing through the room, the foul air escaping as it becomes vitiated.

A dwelling, to be healthy, must by all means be well lighted; a dark house is not only gloomy and dispiriting, but always unhealthy. The amount of disease in light rooms, as compared

with dark ones, is vastly less. Light is as needful to health as fresh air.

A plant will not flourish until it has light. Put a geranium in a cellar and its leaves will fade, its blossoms turn white, and its general look betoken sickliness. So it is with human beings.

Chlorine and hydrogen gases if mixed together and kept in the dark will never unite; the light of day causes them to mingle slowly, but in direct sunshine they combine instantaneously, and explode with a loud report.

Colors fade in a strong light, and, as most readers know, portraits are taken by the action of light.

People who work in dark rooms, or in mines are sallow and sickly in complexion, sometimes deformed. One great cause of despondency and illness among emigrants while on board ship, is want of sufficient light between decks; and it is well known that some animals are tamed by being deprived of light.

Bearing these facts in mind, we shall better comprehend the reason why dwelling-houses ought to be built so as to admit plenty of light. Light ought to be diffused over the whole dwelling, so that no dark corners be left to invite a deposit of that which is untidy or offensive.

A certain degree of warmth is considered necessary to the healthy play of the vital functions. The temperature of this climate is such as to require the aid of artificial heat. This is supplied partly by fuel and partly by clothing. Exercise warms, invigorates, and purifies the body; clothing preserves the warmth which the body generates; fire imparts warmth externally; therefore, to obtain and preserve warmth, exercise is preferable to fire. Within doors, where less exercise can be taken, we are dependent greatly for health as well as comfort on the mode of heating rooms and houses. In small rooms the snug and cheerful fireside is preferable to all kinds of stoves and flues.

Nature teaches us to adopt the materials and amount of clothing to climate and other atmospheric conditions. In this country it is best to have some material next the skin which combines warmth with lightness, protecting from the variations of temperature, and absorbing the insensible perspiration. Spun silk, Angelo, flannel, and wrought lambs'-wool, of various thicknesses for different seasons, are the best materials for this purpose: By habit from youth many can dispense with any under-clothing, but it is always a great protection from disease. In hot climates a stranger is apt, for momentary comfort, to throw off abruptly the under-clothing, and many a life has been

lost by diseases produced from the check to perspiration, which the continued use of the article would have prevented. If thick under-clothing is worn during the day, that of much thinner texture should be used at night.

Children are, in many cases, most insufficiently protected from the weather; numbers go without a single article of under-clothing, either in consequence of carelessness, or from the erroneous idea of rendering them hardy. The surface of a child, from the neck downwards, ought to be kept warm by clothing; exposed chests, bare legs, and thin coverings are synonymous with croup, inflammation of the lungs, and scrofula.

The clothing of the feet is a matter of the greatest importance to all; dryness and warmth must be attended to by those who value health. On the other hand, the head is often—in infants and children especially—kept too hot.

Exercise comes next to air and food in its bearing upon the healthy development of the human frame, but its effects are dependent on a different chain of laws. Respiration, circulation, digestion, secretion, and all the bodily functions are assisted by it.

The evil results of the want or deficiency of exercise are seen in persons of indolent life or sedentary habits. Indigestion, costiveness, and a multitude of chronic maladies are produced, besides the general derangement and discomfort of the whole system under which nervous and hypochondriacal patients suffer.

Without exercise the frame becomes contracted and enfeebled, the internal functions of the body deranged, and the brain incapable of any great mental effort. With it, the machinery of life goes on with vigor and regularity, and the mind is stimulated to healthy action. The benefits of exercise, therefore to those whose occupation does not require any physical exertion, cannot be too highly estimated.

The body must undergo a certain amount of fatigue to preserve its natural strength, and maintain all the muscles and organs in proper vigor. This activity equalizes the circulation, and distributes the blood more effectually through every part.

Cold feet, or chill anywhere, shows that the circulation is languid there. The muscles during exercise press on the veins, and help on the currents by quickening every vessel into activity.

When exercise is neglected, the blood gathers too much about the central region and the oppression about the heart, difficulty of breathing, lowness of spirits anxiety and heaviness, numerous aches and stitches, are evidences of this stagnation.

The precise amount of exercise required depends in a great measure upon a person's strength, but under ordinary circumstances every person should pass at least two hours daily in open-air exercise. The delicate may take exercise within doors, selecting the largest room with the window open, and walking to and fro for an hour or more.

Exercise, therefore, is necessary as an ordinary excitant to be brought into daily operation that the vigor of the functions of the body may be preserved; it is the merciful provision by which the decree "that man should earn his bread by the sweat of his brow" has been converted into a blessing; it is that which gives the laborer sound sleep and healthy appetite.

Cleanliness has a powerful influence on the health and preservation of the body. Cleanliness in our garments and persons prevents the pernicious effects of dampness, bad smells, and contagious vapors, arising from putrescent substances. Cleanliness keeps up a free perspiration, renews the air, refreshes the blood, and even animates and enlivens the mind.

Frequent ablutions of the body in water is not only necessary to cleanliness and comfort, but it is also necessary to the preservation of health. The explanation of this is, that the pores of the skin act as agents for removing from the body useless and superfluous matter, which is constantly being generated. If this refuse is suffered to accumulate, it forms a thick, hard crust, which obstructs the pores and impedes their functions.

To obviate these evil effects, the whole body should be subjected daily to an ablution in cold water, or to friction with a damp cloth.

As we have above stated, when it is considered that the well-being of the whole frame depends in a great measure on the healthy condition of the skin, the importance of bathing must be obvious; and for this purpose, either the cold or tepid bath may be employed. Besides being necessary to cleanliness, the cold bath, when used by persons in health, increases the tone of the stomach, strengthens the digestive organs, and by diminishing the sensibility of the whole system, particularly of the skin, renders the body less susceptible to atmospheric impressions from cold, wet, and sudden changes of temperature. The interval for a person to remain in a cold bath should not at any time, and in the most robust health, exceed ten minutes or a quarter of an hour; and in winter not more than five minutes. In the morning, before breakfast, is the most strengthening time for those in health to indulge in the bath; but those

of less vigorous frame should bathe about two hours after breakfast.

The use of the tepid bath is more important for the purposes of cleanliness, and the general preservation of health, than as a remedy for disease; although in the latter case it is occasionally very valuable. The range of temperature extends from 85 to 92 degrees; and it is sometimes employed previously to the cold bath, the bather lowering the degree of heat gradually each time until he arrives at that of the cold bath. For the mere purposes of ablution the tepid water is the best, choosing the particular degree that is most desirable. It is very refreshing after fatigue and travelling, and is equally serviceable, occasionally, to persons of sedentary habits.

Summary, and Practical Rules.—When you find a want of vigor and activity of body or mind, or when you experience depression of spirits, morbid and gloomy imaginations, or perverted feelings, *try to discover the cause*, and whether it be not one dependent on your own acts.

If you are assured, on competent authority, that you have no organic disease, suspect bad condition of the blood,—to remedy which, look first to your *diet;* and as to *quantity*, remember that generally, during the period of growth, *deficiency* is to be feared; and, in adult life, *excess* is the thing to be guarded against. If your appetite is defective, inquire *why;* if your avocations are sedentary, see that you get exercise daily, and in the open air if possible. Cultivate (for it may be cultivated) quietness of mind, and freedom from care and passion,—both of which destroy the appetite. As to *quality* of your food, remember its twofold object is to produce *heat* and to repair *waste*, but also remember, that for *you*, what you can *well* digest is the only proper food.

If you *waste* much, either by muscular or mental exertion, you must repair it by a due proportion of nitrogenous or flesh-producing food; and for those who work chiefly with the brain, the various kinds of pulse, as peas, beans, lentils, &c., are less suited than for those whose labor is chiefly *muscular*.

Consider your habit of body, and also to what disorders you have a tendency, either by hereditary or acquired disposition.

If you are disposed to emaciation, use abundance of farinaceous food, and that containing starch and sugar,—especially sound bread, and take the utmost care that it be sound.

If you are disposed to superfluous fat (obesity), take the diet just described, but very sparingly; and use more flesh-meat.

If you are disposed to gravel, and it is of the red form, be careful to use little meat and much exercise.

If to the white, or phosphatic kind, moderate exercise, a more liberal diet, and even wine, with tonics, steel, &c., may be required.

If you are prone to gout, a medium diet is best; but beware especially of fermentable aliments, and of badly-fermented liquors.

If your employment is laborious, peas, beans, cheese, close-bread, and fat flesh-meats are suitable; while mental pursuits and sedentary habits require rather lighter bread, but a spare use of cheese, peas, beans, and a moderate amount of flesh-meat.

When, from want of inclination, you can not take flesh-meat, or not so much as your waste requires, be careful to substitute those articles which come nearest to it in quality, as bread (not too light), flour pudding, cheese, peas, beans, cream, and the ordinary fruits and vegetables; but do not depend on starch food, as sago, arrow-root, tapioca, &c., &c., nor on gelatine or jellies of any kind. These may form an occasional addition to, but not the staple of the diet.

As to the times and seasons for taking food—

Avoid long fasting, excessive fatigue, and then taking a full meal in this state. If possible, time it so that, when the stomach and strength begin to require food, you may be able to take it with as little delay as possible.

Dismiss all anxious thought and care when you sit down to a meal; be thankful, and be in charity with all men, as you hope for good digestion. Eat very slowly, and masticate thoroughly; have recourse to the dentist, if needful, for the means of doing so.

Rest an hour after dinner, if possible; then take moderate exercise, and, so far as your pursuits will admit, make your chief exertion of body and mind to fall between your meals, leaving a short interval free for all business, both before and after each.

Three meals in the day are sufficient for an adult—the very weak or the diseased excepted.

As to the choice of particular places of abode in relation to certain predispositions to disease, the following rules may be given:—

All scrofulous or consumptive disorders require pure dry air, but not necessarily hot. It is quite a mistake to suppose that hot climates are favorable to such invalids in all stages of disorder. To some they prove positively hurtful.

Perhaps for those scrofulous or consumptive persons who

bear a high temperature well, it may afford the best-known remedy; while others have been found to bear, even with advantage, the bracing air and extreme cold of Minnesota or Wisconsin.

Neglect not the care of the skin. Use frequent warm baths, soap, friction with Russia duck towels, &c.

Use no hot baths except by medical advice, and cold only if you are robust.

Exercise the limbs as much as possible, in the open air when practicable; and use sufficient exercise, at least once a day, to produce sensible perspiration of the skin.

When out-of-door exercise is impracticable, do not omit indoor; not only gymnastics, but reading aloud, singing, music, especially stringed instruments.

Those who are in moderate health, ought to accustom themselves to the open air in almost all weathers.

Use warm clothing, but avoid as much as possible that which is impervious to perspiration.

As to temperature. Let your rooms be kept at a temperature not exceeding sixty-two degrees nor falling below fifty-four degrees.

When you pass from a warm room to the open air in very cold weather, get well heated before you expose yourself.

In passing from very cold air to the house, go first into the coolest part of the house, so as to avoid the sudden transition from cold to hot air, which is very hurtful.

There is no danger, but much benefit, from the application of cold water to the skin, when the latter is extremely hot; since this is just the condition in which cold affusion is useful, as in fevers.

To promote proper excretion, and to avoid constipation, observe the following:—

Let not your diet be too delicate or concentrated; bulk as well as nutrient elements being necessary.

Remember that constipation often depends on the first stage of digestion being imperfect; therefore eat only what you can thoroughly digest.

Do not use aperient medicines if you can possibly regulate the bowels without them. If they become needful, a few grains of rhubarb or minute quantities of castor-oil (a teaspoonful only) are to be preferred, especially for the aged, who should avoid saline medicines, or use them very sparingly, as they reduce heat.

As to the excretion of urine. If you find yourself growing

fat and weak, and if also you require to pass urine very frequently, suspect disease of the kidneys and seek advice, and remember that this disease arises primarily from bad digestion or improper diet.

Never defer attention to the natural call to evacuate the urine, as danger often ensues from this cause.

Take care to keep the lungs in exercise by sufficient locomotion, by muscular exertion of some kind; and also take care that your clothing admits of the free action of the muscles of the trunk, by which respiration is carried on.

Be careful also to avoid all pressure which can obstruct the circulation of the blood, especially in *the neck* and in the lower limbs.

Learn a lesson from the trainer, for there is perhaps nothing so bad but that some good lesson may be derived from it: and it is a natural and useful inquiry, *by what means* does the *trainer* bring his pupil into a fit condition for such a contest as that which has of late attracted so much attention? The rules are these:—

1st, and most indispensable of all, is abstinence from strong drink, and from *all* sensual indulgences.

2d. Continued waste of the old particles of the body, muscular and nervous especially, and of the blood itself, by *strong exercise;* this waste being supplied by.

3d. Plain *solid* diet of brown meats, especially beef and mutton, good bread, &c., a very *sparing* use only of any *liquid* aliment being allowed.

4th. Active frictions of the skin.

5th. Abundant and pure air, with early bed hours.

We see, therefore, that training is nothing more than *the application of the laws of health* (which throughout this work we have been inculcating) to *their fullest extent.* The only difference which *need* to exist between our ordinary mode of life and a period or *course of training* is this, that in the latter we make health the primary object, and all pursuits of pleasure and business are postponed. This, it may be said, we can not do in ordinary life. True, we can not; but, for the most part, the self-denial, industry, and wholesome diet which are the chief features of training, will be no less conducive to success in business and the enjoyment of real pleasure, than they are to the success of the pugilist, pedestrian, or the victor in a boat-race.

To preserve in health the noblest part of man—the brain and nervous system—observe the following:—

Remember that all thought, all sensation, waste and ner-

vous substance. Do not waste more than your digestive powers can supply.

In pursuing either study or business requiring much thought, take care to *vary* your pursuits as much as possible, that one thing may relieve another.

If possible, choose the early morning instead of the late night.

If you read and write much, have a *standing* desk; do not sit always, and avoid a bent posture.

Do not *habitually* think or read in the recumbent posture; this is a caution of great importance, as determination to the head is much governed by position, and on the other hand, in some particular conditions, and on some particular occasions, the recumbent posture is an advantage.

Rossini, it is said, availed himself of it for his greatest musical creations, and George Stephenson used to go to bed for about three days when he had any very difficult engineering problem to solve.

Remember how much the *passions* waste the nervous powers. Do two things with regard to them.

1. Avoid the spur in any form.

2. Use the rein habitually, and avail yourself of the faculty inherent in us, of the concentration of thought in any desired direction by a strong *effort of the will.*

In all lawful things, the question of excess is entirely *relative*; what is moderation for one, may be *excess* for another. Observe *results* faithfully, and the course will be plain.

Finally, as the very purpose for which we value health, and even life, is *activity of the body and mind*, so is the well-directed employment of both the essential condition for the preservation of health, for the prolongation of life, and what is more, for rendering this life happy, useful, and preparatory to a higher.

INDICATIONS OF DISEASES.

Many of the premonitory symptoms of ordinary disorders are too well known to need description. Irritation and inflammation, for instance, make themselves felt and understood at once; but it is too often overlooked that depression of spirits is a sign of failing health. In fevers there are generally four stages:—

1. The *forming* stage, characterised by a feeling of lassitude and weariness, aching of the limbs, pain in the back, loss of appetite and of sleep, and depression of spirits.

2. The *cold* stage. A chill over the entire body is commonly felt, accompanied by drowsiness and prostration, sometimes by sickness.

3. The *hot* stage, when heat succeeds the chillness, and the skin becomes flushed and dry. Great headache prevails, restlessness, intense thirst, nausea, and light and sound are found to give pain.

4. The *last* stage, in favorable cases, is marked by perspiration bursting out on the skin, and by some relief from pain being experienced. It is scarcely necessary for us to say, that in all cases of fever medical assistance should be procured with as little delay as possible.

The Pulse is one of the chief indications of disease. Walsh, in his *Domestic Economy*, gives the following on the pulse, gums, lips, and stomach:—

When frequent, large, and soft, it indicates the early stage of fever, or of acute inflammation, as in scarlatina, erysipelas, inflammation of the lungs, &c.

When very frequent, large, and hard, it accompanies the full onset of fever, of an inflammatory kind, such as rheumatic fever, small-pox, &c.

A moderately frequent, large, and hard pulse, may be that of mere fullness of blood.

When frequent, hard, large, and thrilling, there is generally some disease of the artery, or in its close neighborhood, such as aneurism or tumor.

A frequent and small pulse is often met with in consumption, in which the quantity of blood is diminished, and is equally impaired.

A slow, laboring, large, and hard pulse is often attendant upon apoplexy, or other forms of pressure on the brain.

The Gums and Lips are also useful as indicative of certain conditions of the system:—

When the gums are swollen, and bleed at the slightest touch, there is reason to believe that the system is generally out of sorts, in a state commonly called scorbutic.

A pale bluish-red gum, with a marked line of blue at the edge, is a sign that lead has been taken into the system in some way.

When the lips are parched, and cracked, with fœtid breath, there is reason to suppose that fever is present in a typhoid type, though this is by no means a certain sign by itself.

The Stomach.—The symptoms affecting the stomach are vomiting or nausea, flatulence, pain after eating, and in some cases eructations of a watery fluid in large quantities.

Flatulency is a symptom of disordered stomach of a chronic character.

Pain after eating is also a sign of disordered stomach, but there is generally inflammation accompanying it.

The Bowels present the following symptoms when disordered:—

Constipation may arise from torpor of the bowels, owing to long continued neglect, or the absence of aperients, or other causes, or from a defective secretion of the natural stimulus, the bile.

Diarrhœa consists in an increased discharge of liquid fæces, either caused by the irritation of food or medicine, or the presence of a hardened fæces; or sometimes from a poison, such as cholera.

The Eye.—The expression of the eye, and of the whole countenance, affords an excellent index to the state of health or disease. When the eye is bright, but not too much so, high health is generally present; if languid, there is a want of tone; and, on the other hand, if excited and wandering, some affection of the brain may be predicted.

The Tongue is a certain indicator of the state of the system. Florid redness is a sign of dyspepsia; a livid or purple tongue shows that there is obstruction in the circulation, or lungs; a pale or white tongue denotes a weak and impoverished state of the blood; a furred tongue is common to some people even when in health, but when there are bright red points perceptible beneath the fur, there is a scarlet fever present; a tongue with red edges and furred in the middle is a sign of intemperance, or brain disorder.

Hints on Giving Medicines.—Medicines for females should not be so strong as those for males, therefore it is advisable to reduce the doses about one eigth.

Persons of a phlegmatic temperament bear stimulants and purgatives better than those of a sanguine temperament, therefore the latter require smaller doses.

Purgatives never act so well upon persons accustomed to take them as upon those who are not, therefore it is better to change the form of purgative from pill to potion, powder to draught, or aromatic to saline. Purgatives should never be given when there is an irritable state of the bowels.

Stimulants and narcotics never act so quickly upon persons accustomed to use spirits freely as those who live abstemiously.

The action of medicines is modified by climate and seasons. In summer certain medicines act more powerfully than in winter, and the same person could not bear the same dose in July that he could in December.

Persons whose general health is good bear stronger doses than the debilitated, and those who have suffered for a long time.

Castor-oil may be taken in milk, coffee, or spirit, such as brandy; but the best method of covering the nauseous flavor is to put a tablespoonful of strained orange juice in a wineglass, pour the castor-oil into the centre of the juice, and then squeeze a few drops of lemon juice upon the top of the oil.

Cod-liver oil may be taken, like castor-oil, in orange juice.

Peppermint-water almost prevents the nauseous taste of Epsom salts.

A strong solution of extract of liquorice covers the disagreeable taste of aloes; milk that of cinchona bark; and cloves that of senna.

An excellent way to prevent the taste of medicines is to have the medicine in a glass, as usual, and a tumbler of water by the side of it. Then take the medicine and retain it in the mouth, which should be kept closed, and if you then commence drinking the water, the taste of the medicine is washed away.

It is desirable to render medicines as palatable and pleasant as possible and to administer them at such times, and with such precautions as shall render their retention and action most probable; for adults, who can swallow pills, this is the easiest and best mode of taking such remedies as will go in a small compass. For children generally they are unsuitable, and draughts or powders must be given to them, unless, as is now often the case, medicated cakes or lozenges, containing the remedies which their cases require, can be procured.

The best vehicle for children's powders which contain any heavy substance, is sugar moistened just a little, or honey, or molasses, or gum; it must be some thick substance or the powder will fall to the bottom, and so not be taken. Powders with rhubarb, magnesia, or any light substance, may be mixed up thin and drank; a piece of sugar with a few drops of essence of peppermint on it, or a strong peppermint lozenge will get rid of the unpleasant taste perhaps sooner than anything else; those who object to this should chew a piece of dried orange peel both before and after swallowing the medicine. Aperients are best taken on an empty stomach, so are vermifuges; tonics should be taken an hour or so before meals; except preparations of iron, which are best an hour after meals; emetics are commonly directed to be taken in the evening, because after their operation the patient may rest a while. Stimulants, of course may be taken at any time when required; opiates always at bedtime, that their action may not be interrupted; unless it be a

case of spasm or violent pain which calls for instant relief. Strong purgatives are best taken in the morning; at night they would disturb the rest, and cause great inconvenience. All these, of course, are but general rules, to which there are numerous exceptions. The discreet mother or nurse will know when they are to be strictly followed, and when departed from.

Condition of the Stomach.—The least active remedies operate violently on some persons, owing to a peculiarity of stomach or disposition of body unconnected with temperament. In giving medicines, the medical man always so regulates the intervals between doses that the following dose may be taken before the effect produced by the former is altogether effaced. By not attending to this rule, the cure is always commencing, but never rapidly proceeding—it may, indeed have no effect at all. It is to be borne in mind, at the same time, that some medicines, such as mercury, etc., are apt to accumulate in the system, and danger may thence arise if the doses be repeated too frequently. Aloes and castor-oil acquire greater activity by use, so that the dose requires to be diminished. With due caution, and a proper attention to the doses ordered, no untoward circumstance need arise.

Emotions and Passions of the Mind have a most powerful influence upon the disorders of the body. *Hope* is a mildly stimulating or tonic feeling, which is most beneficial in all cases. The influence of the *imagination* on disease has long been known, and the extraordinary cures we constantly hear of as effected by such absurd means as homœopathy, mesmerism, etc., are, in fact, all referable to the influence of the imagination over a diseased body or disordered mind.

Doses Proper for Different Ages.

Ages.	Proportional Doses.	Dose.
For an Adult	Suppose the dose One	as 1 drachm or 60 grains.
Under 1 year	Will require only 1-12th	" 5 grains.
" 2 years	——————— 1-8th	" 8 "
" 3 "	——————— 1-6th	" 10 "
" 4 "	——————— 1-4th	" 15 "
" 7 "	——————— 1-3d	" 1 scruple or 20 grains.
" 14 "	——————— 1-2	" 1-2 drachm or 30 "
" 20 "	——————— 2-3ds	" 2 scruples or 40 "
Above 21 "	The full dose One	" 1 drachm.
" 65 "	Will require only 3-4ths	" 45 grains.
" 80 "	——————— 2-3ds	" 2 scruples or 40 grains.

In the same manner for fluids divide the quantity suited

for an adult by the above fractional parts. If for a child under one year, the dose will be one-twelfth; under two years, one-eighth; under three years, one-sixth, and so on.

Approximate Measures.

For the convenience of those who have not accurate measures at hand, we give the approximate quantities:

A teacup contains four fluid ounces, or one gill.
A wine glass contains two fluid ounces.
A tablespoon contains one-half fluid ounce.
A teaspoon contains one-eigth fluid ounce, or one drachm.
Sixteen large tablespoonfuls make half a pint.
Eight " " " one gill.
Four " " " half gill.
Twenty-five drops are equal to one teaspoonful.

Apothecary's Weight.

20 grains	=	1 scruple	=	20 grains.
60 grains	=	1 drachm	=	3 scruples.
480 grains	=	1 ounce	=	8 drachms.
5,760 grains	=	1 pound	=	12 ounces.

The scruple and drachm are discarded in the new weights. Measures of capacity are used for liquids in mixing medicines. Formerly wine measure was employed, but now it is the imperial. The weight of the imperial minim of water is 91 grains, and is multiplied as follows:—

60 minims	=	1 fluid drachm	=	60 minims.
480 minims	=	1 fluid ounce	=	8 fluid drachms.
9,600 minims	=	1 pint	=	20 fluid ounces.
76,800 minims	=	1 gallon	=	8 pints.

The fluid ounce is the measure of one ounce of water; the pint, 1¼ lbs.; and the gallon, 10 lbs. In prescriptions the weights and measures are generally expressed by signs or symbols, with Latin numerals affixed. These signs, with the Latin and English words which stand for them, are given below:—

m Minim, 1–60th part of a fluid drachm.
℈j Scrupulus, a scruple.
ʒj Drachma, a drachm.
fʒj Fluid drachma, a measured drachm.
℥j Uncia, an ounce (437·5 grains).
f℥j Fluid uncia, a measured ounce.
℔j Libra, a pound (7,000 grains).
Oj Octarius, a pint.
gr Granum, a grain.
ss Semis, half, affixed to any of the above signs.

The numerals j., ij, iij., iv., v., etc., show the number of grains, ounces, pounds, etc., to be taken; thus, *m*lx. denotes 60 minims, ʒ vii. 7 drachms, and ℥ j. 1 ounce.

DISEASES AND THEIR REMEDIES.

Abscess.—Abscess is a collection of matter produced by inflammation.

Causes.—It arises from previous inflammation of the inner surface of the skin and its sorrounding parts, which did not pass off by gradual cessation, but a cavity (filled with matter) was formed, which is termed an abscess.

Symptoms.—The inflammation of the part quickly subsides; a heavy, dull, cold sensation of the part, instead of acute pain; frequent sighs, or shivers, through the frame; and the top of the tumor appears soft and white; all around is redder.

Treatment.—Take a slightly cooling and gentle aperient. If the abscess goes on regularly, leave it undisturbed until its pointed shape and the thinness of the skin show its fitness for lancing. Do not squeeze it. Foment the part with hot flannel, and apply a poultice of linseed-meal mixed with milk and water, or bread mixed with oil. In parts where the poultice is difficult to retain, it must be put into a bag made of muslin with a tape attached to each corner of the bag to fasten it on and retain it in its place. The poultice should be renewed every six or eight hours, and continued for some days. After discharging pretty freely, a slip of lint should be inserted by a probe, and renewed once or twice a day, according to the nature of the discharge. After this the part should be supported by a bandage, or slips of adhesive soap or plaster to facilitate contraction; and the aperture should be left open to facilitate the discharge. Good matter is about the color and consistency of cream, with no smell and scarcely any taste. If this is not the case, the matter is unhealthy, and the sore is not doing well. When healed, tonic medicine and change of air should be resorted to. During the continuance of the abscess, the patient should live on food which is plain and nutritious, without being stimulating, avoiding at the same time—except under extraordinary circumstances—wine, spirits, and beer.

Abscess in the Ear.—Apply bread poultices to the ear, and warm fomentations; syringe the ear with warm milk and water. When the abscess has broken and discharged freely, the ear must be kept very clean, and a syringeful of a slightly astringent lotion, such as ten grains of sulphate of zinc to a quarter of a pint of rose-water, be injected lukewarm twice a day.

Or this will be found beneficial:—

When there is much discharge, injections of warm soap and water, blisters behind the ear, or a drop or two of the following mixture put into the ear will be found beneficial: ox-gall, three drachms; balsam of Peru, one drachm. Mix.

Aneurism.—Aneurism has been defined as a pulsating tumor, containing blood, and communicating with the interior of an artery.

Aneurisms may be internal or external. In the former case, being so situated in the cavities of the body—as in the abdomen, chest, or cranium—as to render the nature of the disease often very doubtful; in the latter, they are so placed in the limbs that access may be easily had to them.

Causes.—The whole arterial system is liable to aneurisms; but they occur much more frequently internally than externally, and oftener in those main trunks near the heart than elsewhere. They usually occur in persons of advanced age, such being most liable to calcareous depositions of the coats of the arteries, which are among their predisposing causes, with which may also be named violent contusions, abuse of spirituous liquors, frequent use of mercurials, fits of anger, extension of the limbs, straining, and violent exertion of any kind. Gunshot, and other wounds, also frequently cause aneurisms, which few persons long addicted to intemperate habits escape.

Symptoms.—In the early stage there is a small tumor, pulsating very strongly, more or less evident to the sight and touch, according to the depth at which it is seated. Sometimes its presence is only known by the rapid pulsation, and pain, and tenderness of the part. Sometimes, only as it interferes with the functions of some important organs, producing impeded respiration, cough, and other distressing symptoms, and ending in death; for which, without a post-mortem examination, the physician can assign no adequate cause. For the internal form of the disease no remedial measures can be advised. They depend so much upon situation, and other varying circumstances, that only the medical practitioner can judge of the means to be employed.

Treatment of external aneurisms.—This must also depend

very much on circumstances. A surgical operation appears to give the best chance of a cure; and this, which consists in dividing and tying the artery on which the aneurismal tumor is situated, can be attempted by no unprofessional person.

No external irritant liniment or friction must be applied in aneurism; nor fomentations and other hot applications. When the bleeding has commenced, the strength must be sustained by good nourishing diet; but, until it has, it is best to keep the system low. Active exertion must be avoided, both mental and physical, and also pressure upon the part affected.

Apoplexy.—This is deprivation of life or motion by a sudden stroke or blow; it is one of the most awful and appalling modes of sudden death; in an instant a healthful and vigorous man is smitten down—one who has exhibited no signs of decay or disease—who has perhaps received no premonitory warning, lies before us motionless and stark.

Apoplexy may be either cerebral—proceeding from congestion or rupture of the brain—or pulmonary—proceeding from hemorrhage of the parenchyma of the lungs. The first is its more common form, and this may be spoken of under four heads: first, when it is sudden and violent at once; second, when it is comparatively slight at the commencement, and progressively increases in severity; third, when it commences in apoplexy and terminates in paralysis; fourth, when it commences in the latter, and terminates in the former.

Causes.—The causes of apoplexy are either predisposing or exciting; among the first may be named, first: Sex—men are more liable to it than women, because they are more subject to its exciting causes, of which we shall presently speak; second: Age—it is very rare in childhood, rare also in youth, most common between the ages of forty and seventy—rare much beyond the latter age; third: Bodily Conformation—the man of sanguine and plethoric temperament, with large head, short neck, and full chest, is most liable to its attack, although one of the opposite state and condition of system is sometimes smitten down with it; fourth: Mode of Life—persons of sedentary habits, who live luxuriously, are its frequent victims; fifth: Suppression of Evacuations or Eruptions—as the piles, perspiration, healing of a seton or a wound; sixth: Mental Anxiety—such as a long continuance of harassing fears, business perplexities, grief, or any violent emotion or passions. All these are predisposing causes of apoplexy, to which it has been said that the studious are more liable than others; but this is an error, as the history of lawyers, judges, and philosophers, ancient and

modern, is sufficient to show. Persons of advanced age, who take rich and stimulating diet in more than sufficient quantity, and whose intellectual faculties are exercised but little, are those most frequently carried off by this embodiment of the Greek idea of the "skeleton at a feast." The most powerful exciting causes of apoplexy, then, are intemperance, whether in eating or drinking, as well as violent exertions of the mind and body—whatever, in short, tends to determine the blood with an undue impetus to the brain or impedes its return from it, is an invitation to this dreadful destroyer to step in and arrest the vital current in its flow, as the breath of frost stays the water of the river.

Symptoms.—Apoplexy may be known by the patient falling down in a state of insensibility or stupor, out of which it is impossible to rouse him by any of the ordinary means; the face is generally flushed, the breathing difficult and stertorous; the upper lip-margin is projected at each expiration; the veins of the head and temples protrude as though overfilled, the skin is covered with perspiration, and the eyes are fixed and bloodshot; sometimes, however, the face is pale, with a look of misery and dejection; and the pulse, instead of being full and hard, is weak and intermitting.

Treatment.—This, of course, must vary considerably in accordance with the pathological condition of the brain of the person attacked, and with other circumstances which only those accustomed to the treatment of disease can judge of. The immediate measures to be adopted when a fit of apoplexy comes on are the following: Place the patient in a sitting position, with the legs depending; remove everything about his neck, and let the air be freely admitted; apply cold wet cloths to the head and neck, and mustard plasters to the soles of the feet; if the patient be old and the pulse weak and feeble, the skin bloodless, and the countenance pinched, warm flannels and hot bricks should be used, and cold water should be dashed in the face, strong spirits of ammonia applied to the nostrils, the feet put into a warm bath with a little mustard, and every means taken to arouse the patient from his state of lethargy. As soon as this is so far effected that he can swallow, give ½ dram of aromatic spirits of ammonia in 1½ ounces of camphor mixture, as a stimulant draught, but it is only when the pulse is feeble and fluttering that the stimulant may be administered; this is the exceptional case in apoplexy—most commonly the symptoms are those first described. Purgatives must be got down as soon as possible; 10 grains of calomel placed on the tongue, and

washed down with a black draught, or 2 or 3 drops of croton-oil may be rubbed on the back of the tongue, and an injection composed of 2 tablespoonfuls of common salt, with a little oil or butter, and a pint of warm water; or a tablespoonful of soft soap mixed with the same quantity of water; or an ounce of spirits of turpentine, rubbed down with the yolk of an egg, and a pint of thin gruel; one of these should be repeated every two hours until some decided effect is produced. Other means of relieving the system may be taken should these fail, such as blisters behind the ears, to the nape of the neck or calves of the legs; should the head be very hot let it be shaved, and a cold lotion be applied to it—water and vinegar or acid water will do best. Should the attack be soon after a full meal, administer an emetic—a scruple of sulphate of zinc with a grain or two of tartar emetic; something like this should always be given when apoplexy arises from the effects of opium or spirits. In all cases, after the crisis of the disease is over, and when the patient has become convalescent, it behooves him to be very careful, as a slight indiscretion may bring on a fresh attack.

We have said that apoplexy comes without warning, but this is not strictly true. However sudden the attack itself may be, there are certain premonitory symptoms which no prudent man will disregard. Among these may be named a sense of fulness in the veins of the head, and a feeling of pressure in the head itself, with occasional darting pains, giddiness, vertigo, partial loss of memory, and the powers of vision and of speech; numbness of the extremities, drowsiness, and a dread of falling down; irregularity in the action of the bowels, and involuntary passage of urine. These all indicate that some internal mischief is going on, and if their warning is attended to the threatened attack may, perhaps, be avoided. Persons whose full habit of body and modes of life predispose them to this disease, should, when such warnings reach them, live sparingly, avoid stimulants, especially fermented and spirituous liquors, take regular and moderate exercise, sleep on a firm pillow with the head elevated, and nothing round the neck to impede the act of breathing; the mind should be in a cheerful condition, and free from excitement; sexual indulgence should rarely be resorted to; late suppers must be avoided, and a hard hair mattress used for sleeping on. Keep the bowels regulated by an occasional dose of saline purgatives. Those of a spare habit should take light, although nourishing diet, a little beer or wine, if they have been accustomed to it, and it does not affect the head. Spirituous liquors and hot spices

should be avoided, and great bodily fatigue or nervous excitement of any kind.

Eclectic or Herbal Treatment for Apoplexy.—The great object is to draw the blood from the head and equalize the circulation. To do this apply cold water to the head, face, and neck, and place the feet in warm water to which has been added some powdered mustard or Cayenne. An injection must be used if the patient shows no symptoms of rapid recovery, the same as in the regular treatment, and also the croton-oil.

It is desirable to promote perspiration, which may be done by using composition powder, pennyroyal or catnip tea. After recovery, observe the rules regarding diet, etc., as before directed, and take abundance of exercise in the open air.

Asthma.—This is a disease of the lungs, whose main characteristic is laborious breathing, which comes in paroxysms, and is accompanied by a wheezing noise. Humid asthma is that in which the attack terminates in expectoration; when it does not this is called dry asthma. Persons so afflicted have generally disease of the heart or lungs. When they have not, it is called spasmodic asthma, and to this persons are sometimes subject, who, when the attack is passed, may appear quite vigorous and healthy.

Causes.—Hereditary predisposition; dwelling in a cold or moist atmosphere, or being subject to sudden changes of temperature; inward gout, intense study, or great mental anxiety; suppression of accustomed evacuations; irritation of the air-cells and lungs by atmospheric impurities; irritation of the stomach, uterus, or other viscera.

Symptoms.—The attack commonly occurs in the night, the patient having gone to bed in a listless, drowsy state, with a troublesome cough, oppression at the chest, and symptoms of flatulency; towards midnight probably the breathing becomes more labored, the wheezing sound louder, and the patient is obliged to assume an erect posture to prevent suffocation. Sometimes he starts out of bed, and rushes to the window for air, or he sits with his body bent forward, his arms resting on his knees, with a flushed or livid face, if it be not deadly pale, gasping and struggling for breath, in a condition painful to behold; the pulse is weak and intermittent, with palpitation of the heart; sometimes there is vomiting, with involuntary emission of the urine, which is of a pale color, and relaxed bowels. The attack will probably last for a couple of hours or more, when the severe symptoms will gradually remit, with an expectoration of frothy mucus, and a tranquil sleep follows. For some days

there will be felt a tightness of the chest, and the slightest exertion brings on a difficulty of breathing; there will be slighter paroxysms, and after a longer or shorter period another severe one.

Treatment.—The objects to be attained in this are, first to moderate the violence of the paroxysm; second, to prevent its recurrence. Gentle aperients should be administered, and antispasmodic mixtures and injections; a blister on the chest will often afford much relief. The following is a good formula for the mixture: Tincture of assafœtida, 2 drachms; sulphuric ether, 2 drachms; tincture of opium, 1 drachm; peppermint water, 6 ounces. Mix, and take a tablespoonful every hour. If the expectoration is scanty and difficult, add to this—Tincture of squills, 2 drachms; wine of tartarized antimony, 1 drachm.

Or make the vehicle, instead of peppermint water, mixture of ammoniacum; that is, about two drachms of the gum rubbed down with six ounces of water. The best aperient is castor-oil, given in peppermint, or weak brandy and water. Where there is reason to suppose the stomach is overloaded, an emetic, composed of one grain of tartarized antimony, and one scruple of powder of ipecacuanha, in half a tumbler of warm water, should be given. The enema may consist of two drachms of gum assafœtida to a pint of thin gruel. Tincture of lobelia inflata is good in obstinate cases, dose one drachm; and also tincture of nicotiana, or tobacco in nauseating doses. Inhaling the fumes of this plant through a pipe, and also of stramonium, is sometimes of service, and the good effect of either will be assisted by a cup of hot coffee, putting the feet in warm water, or using the warm bath.

To prevent the return of a paroxysm of asthma, avoid the exciting causes, keep the bowels gently open with rhubarb, or some other mild aperient, and strengthen the tone of the stomach by bitter infusions, such as camomile or gentian. If there is tightness of the chest, put on a blister, and take an emetic now and then to clear out the phlegm from the bronchial passages. Take at bedtime ten grains of Dover's powder, or the same of compound squill pill, with a little warm gruel. For the rest, take light and nourishing diet, avoiding everything difficult of digestion; wear warm clothing—flannel next the skin; have regular and moderate exercise; change of climate if possible, should the situation occupied be damp, or bleak and exposed. Do not indulge in sensual or intemperate habits.

Eclectic or Herbal Treatment for Asthma.—When the symptoms appear, at once place the feet in warm water, and

take a decoction of catnip or pennyroyal, to produce a gentle perspiration. If the attack still continues, take a tablespoonful of the tincture of lobelia in a cup of warm tea, every half hour. The following remedy has produced marked results in severe cases: Take a half ounce of well-bruised seneca snakeroot; immerse in one pint of water, and boil over a slow fire till reduced to a half pint. Dose, a tablespoonful every ten or fifteen minutes. A teaspoonful of mustard-seed, taken in tea or soup morning and evening, has cured many severe cases. Damp houses and damp air must be carefully avoided. Let the food be light and nutritious; sleep on a hard mattress; and frequently take the country air.

Pains in the Back.—Pains in the back are of many kinds, and may result from a variety of causes.

Treatment.—If weakness be the cause, cold bathing, the shower-bath, and squeezing a sponge repeatedly down the back, together with vigorous rubbing with a rough towel, will be found efficacious. Rest, in a recumbent or semi-recumbent position, will also alleviate the pain and contribute to its removal.

Baldness.—This is caused by the disorganization of the root or bulb of the hair, and may proceed from age, general derangement of the functions, or local disease. When baldness proceeds from age, the hair can never be restored.

Treatment.—Mix well together liquor of ammonia, one ounce; camphorated alcohol, one and a half drachms; bay salt, half ounce; water, one pint. With this mixture bathe the head three times a day. Afterwards, rub well into the scalp a pomatum made of fresh hog's-lard three and a quarter ounces, and grated camphor one ounce. The action of the sedative water restores the capillary circulation which forms the bulb of the hair, and imparts new life to the organ. The pomatum assists and favors the growth.

Or use either of the following: Castor oil, one and a half ounces; tincture of cantharides, half an ounce. Mix well together, and rub the bald part with it night and morning. Or use lard, made to a thin consistence with rum, rubbed in night and morning.

One of the most successful remedies ever used is prepared as follows: Glycerine, 4 ounces; tannin, 1 drachm; tincture of cantharides, 2 drachms; oil of capsicum, 10 drops.

Apply to the bald spots morning and evening.

Barber's Itch.—It is communicated by an unclean razor or brush in shaving, or may be sometimes caused by a dull razor.

Symptoms.—It appears on the hairy part of the face—the chin, upper lip, the region of the whiskers, the eyebrows, and nape of the neck. It consists in little conical elevations, which maturate at the top, and have the shaft of a hair passing through them. These pimples are of a pale yellowish color. In a few days they burst, and the matter, running out, forms into hard, brownish crusts. These crusts fall off in one or two weeks, leaving purplish, sluggish pimples behind, which disappear very slowly.

Treatment.—The most important part of the treatment is the removal of the cause. The beard must not be pulled with a dull razor, and the shaving had better be discontinued altogether, the beard being simply cropped off close with the scissors. All intemperance in eating or drinking must be avoided, as well as exposing the face to heat. A light, cool diet will do much toward a cure. Nitrate of mercury ointment, and a solution of oxalic acid are the best applications.

Bed Sores.—The constant pressure of certain portions of the body upon the bed or mattress frequently produces in invalids excoriations, which are known by the above name.

Treatment.—When the skin becomes red and inflamed, and painful to the touch, immediate steps should be taken to prevent if possible an abrasion of the skin. Mix two teaspoonfuls of brandy with a wineglassful of hot water, with thirty drops of tincture of arnica. Dab the part with this, and dry with violet powder. Or, either before or after the skin breaks, dip a camel-hair brush into collodion, and brush the inflamed surface over, repeating the operation from time to time until the part is healed.

Blear Eye.—A term given to an inflammatory appearance of the eyelids and corners of the eye itself.

Causes.—Advancing age, cold, or temporary weakness. It is also caused by hereditary taint, and resolves itself into a constitutional defect.

Treatment.—Where it is not constitutional, use the following lotion: mix five grains of sulphate of zinc in two tablespoonfuls of water. Moisten the eye frequently with a linen rag.

Another good remedy is to take an active aperient of calomel and rhubarb, and bathe the eye with poppy-water. If the eye should feel weak after the inflammation has subsided, bathe it frequently during the day with a lotion composed of one grain of sugar of lead to a large tablespoonful of water.

Bleeding from the Bladder—Bloody Urine.—Causes.—Falls, blows, bruises, or some violent exertion, such as jump-

ing or the like; sometimes from small stones in the kidneys, ureter, or bladder, which wounds those parts.

Symptoms.—The blood parted with is somewhat coagulated, and deposits a dark brown sediment resembling coffee grounds. When the blood is from the kidney or ureter, it is commonly attended by acute pain, and sense of weight in the back, and some difficulty in parting with it. When the blood is from the bladder immediately, it is usually accompanied by a sense of heat, and pain at the lower part of the body, and the blood is not so much coagulated.

Treatment.—Empty the bowels with cooling purges, and take the following astringent tonic mixture: Tincture of steel, three drams: infusion of roses, six ounces; mix, take two tablespoonfuls every three hours; and physicians generally recommend that the drink should be thick barleywater, solution of gum arabic, or a decoction of mallows sweetened with honey.

Mild aperient draught: Tartrate of potash, three drams; tincture of senna, one dram; manna, half an ounce; warm water, one and a half ounces; mix, and take at once.

Bleeding at the Nose.—Persons of a sanguine temperament and full habit of body are most subject to this disease; but it ought to be regarded as a salutary provision for the relief of the overcharged system. If it does not run to a weakening extent it is very questionable whether it should be interfered with. Those who are troubled with vertigo and headache, arising from a fullness of the veins and a tendency of blood to the head, know how much better and lighter they feel after a good bleeding from the nose; and there can be no doubt that many a fit of apoplexy has been averted by it, and many an attack of inflammatory fever, or inflammation of the brain.

Causes.—Violent exercise, great heat, blows on the part, the long maintenance of a stooping posture, and a peculiar smallness of the vessels which convey the blood to the brain, rendering them liable to rupture. It may come on without any previous warning, or be preceded by headache and a sense of heaviness, singing noises in the ear, heat and itching of the nostrils, throbbing of the temporal artery, and accelerated pulse.

Treatment.—When it comes on too frequently and continues long, so as to cause faintness, and especially if the person subject to it be of a weakly habit or advanced in years, it should be stopped as soon as possible. The stoppage may sometimes be effected by immersing the head in cold water, free exposure to cool air, and drinking cool acidulous liquids. The body of the patient should maintain an erect position, with the head thrown some-

what back, a key or other cold substance applied to the spinal cord, vinegar be snuffed up the nostrils, or an astringent wash injected with a syringe. It may be composed as follows: Alum and acetic acid, of each two drams; water, six ounces. Or, 3 drams of the muriated tincture of iron in the same quantity of water. Or, if these fail, the nostrils may be plugged with lint dipped in a strong solution of the sulphate of copper; or the lint first moistened, and then dipped in finely powdered charcoal. When the bleeding has stopped there should be no haste to remove the clotted blood from the nostrils. Let it come away of itself; do not blow the nose violently, nor take stimulants, unless there be excessive faintness, in which case a little cold brandy and water may be taken. Where there is a full habit of body, cooling medicines and low diet may be safely advised.

Bleeding from the Lungs (*Hæmoptysis*).—This denotes in general the spitting of blood, and is generally used by pathologists to signify the expectoration of blood from the lungs and air-tubes. It is important to ascertain the source of the blood which escapes from the mouth, and if determined to be from the lungs, to ascertain whether it is symptomatic of disease of these organs, or merely vicarious in its character. It is not so much dangerous in itself as an indication of some other dangerous disease, being most frequently connected with tubercular consumption.

Causes.—Bleeding from the lungs may occur without organic disease, in plethoric and robust individuals living a life of excitement and excess, and in nervous, irritable individuals, weakened by mental or bodily fatigue, and leading sedentary lives. It is often hereditary, and may be brought on by violent muscular effort, paroxysms of cough, blows or pressure on the chest, inspiration of irritating vapors, or of rarefied air on high mountains. The blood may be exuded from the tracheal or bronchial membranes or it may proceed from capillaries communicating with the air passages in any part of their extent. The amount varies from a dram or two to as many pints at a time, and is generally florid, and more or less mixed with air, differing from the dark, coagulated blood which comes from the stomach.

Symptoms.—An attack is frequently announced by a feeling of heat and oppression in the chest behind the sternum, followed by a cough, which brings up the blood. When the quantity is very great, it pours forth without a cough, and almost by an act of vomiting, with considerable spasmodic effort.

Treatment.—Elevating the breast and shoulders, admitting

plenty of fresh air, with spare diet, and perfect quiet, are among the most useful measures to be adopted. The chest should be sponged with vinegar and cold water, and a dessert-spoonful of the former in half a wineglassful of the latter will be a useful accompaniment to any other medicines which may be thought necessary. The oil of turpentine, ten to thirty drops in a glass of water; or gallic acid, in doses of ten to fifteen grains, every three or four hours, have been found of great value. Cold liquids, and the sucking of pieces of ice, will be of service. Nauseating medicines, as tartar emetic and ipecacuanha, are also frequently employed. A teaspoonful of common salt, taken frequently, is an excellent popular remedy. In all cases calmness of mind, rest, silence, erect position, cool air, and freeness of the bowels should be enjoined. When the attack proceeds from congestion, blood-letting is recommended in certain cases. If cough be present, it should be allayed by narcotics. After the attack astringent tonics, as iron and quinine, may be given; and the return of the bleeding is to be guarded against by avoiding the exciting causes, and attending to the general health.

Blindness.—Deprivation of sight may proceed from various causes, such as one of the diseases which affect the eyeball, or deficiency of power in the optic nerve, local or general paralysis, or any disease whose seat is in the brain or the nervous system: the formation of a speck on the eye, or of a film over the lens. Sometimes the affection of the brain or nerves, from which loss of sight proceeds, is sympathetic, arising from a disordered stomach. In this case, as in many others, it is but transient; and matters may be set right by a blue pill and senna draught, with low diet, and avoidance of the exciting causes of the disorder. If these do not have the desired effect, a surgeon should be consulted, as there is reason to suspect some organic mischief. Leeches on the temples, blisters behind the ears, cupping in the neck—either or all of these may be tried, should there be a sense of fullness, headache, or giddiness, accompanying indistinctness of vision. In this case, too, more powerful medicines, such as colocynth and calomel pills, should be taken, and a course of depletion vigorously carried out.

Proceeding, as blindness does, from such a variety of causes, few general directions can be given for its treatment. When it is owing to a change in the structure of the eye itself, its approaches will be very gradual, unless this change is the result of active inflammation. Temporary loss of sight is a frequent symptom of apoplexy. It also results from diseases of exhaustion, and sometimes occurs after copious bleeding; its total loss may

be effected by a blow on or about the region of the eye. For the blind from birth there is no hope of recovery.

Acute Inflammation of the Bowels.—This is an inflammation of the mucous membrane which lines them, as it is generally understood, but really involves more or less the whole substance of the bowel.

Symptoms.—The disease begins with a chill, and with uneasiness and slight griping pains, which increase in severity until they are intense and burning. Pressure aggravates the pain, which is greatest about the navel, but extends over the whole bowel. There is sickness at the stomach, and sometimes vomiting; loss of strength, costiveness, great anxiety, thirst, heat, and fever; dry, furred, and red tongue, and but little urine, with pain in passing it. The matters passed from the bowels are dark and fetid, and the whole belly is sore to the touch. The pulse is quick, hard, and small. If the stomach sympathizes but little with the disease, it indicates the seat of it to be in the lower portion of the bowels. The length of time, also, before drink and medicine are vomited up after being swallowed is a pretty sure indication of the distance of the disease from the stomach. To discriminate this disease from colic, it is necessary to know that pressure produces pain, which it does not in colic; the pain never wholly ceases, as it does in colic; the knees are drawn up and the breathing short, or altered, as they are *not* in colic.

Treatment.—Hot fomentations, mustard-poultices, soothing and quieting injections, cooling drinks, such as slippery elm, flax-seed-tea, etc., with tincture of veratrum viride in full doses, or ten drops every hour, to keep up a free perspiration, will generally be all that is necessary.

If the disease has been occasioned by the strangulation of a gut, or by hernia, it is very unmanageable. The gut may be disentangled by applying a *large* dry cup, or, what is better, a number of small ones, but the tenderness of the belly makes this difficult.

Chronic Inflammation of the Bowels.—The signs of this disease are a dull pain in the belly, the tongue bordered with red, abdomen either swelled or flat, skin dry and husky, cold extremities; small, frequent pulse; thirst, loss of flesh, low spirits, scanty urine, slimy discharges from the bowels from one to four times a day.

Treatment.—The treatment commences with mustard poultices and hot fomentations. Cold compresses at night—the body well covered up in flannel—should be used if the bowels

are very feverish, and the warm bath twice a week, taking care not to get cold. The diet must be very simple and unstimulating—beginning with gum water, rice or barley water, sago or arrowroot gruel, and gradually raising it to chicken broth, beef tea, or tender beefsteak. Gentle carriage exercise, as soon as the patient is able, will prove beneficial. A very mild laxative should be given on the inflammation being subdued.

Bronchitis.—Bronchitis may be succinctly described as inflammation of the lining membrane of the passages of the throat, through which the work of respiration is carried on. It will be evident that an inflamed state of these passages must, besides the local irritation caused thereby, seriously interfere with the vital functions. Bronchitis is either acute or chronic.

Causes.—The exciting causes are nearly always exposure to cold and moist air, against which people cannot too sedulously guard. Inhaling irritating substances or vapors will also cause it.

Symptoms.—The acute stage may commence immediately after exposure to cold. Most usually the lining membrane of the eyelids, nostrils, and throat are first affected, and then the inflammation extends downwards into the chest. The earlier symptoms are running at the nose, watering of the eyes, frequent sneezing, and all the distressing symptoms of what is generally known as Influenza. The fever generally runs high; there is extreme lassitude, with headache, and probably a troublesome cough, with expectoration of mucus. With adults this, the most active stage of the disease, frequently assumes a very dangerous character, and prompt measures are required to arrest its progress. If the febrile symptoms continue to increase in intensity, and the breathing becomes difficult from the clogging of the tubes with mucus, there is great reason for apprehension.

Treatment.—The patient should, as a matter of course, be confined to bed; warm diluent drinks, such as flaxseed-tea, or barley water, with a slice or two of lemon in it; gentle aperients, if required; foot-baths, and hot bran-poultices to the chest. The chief dependence, however, is to be placed upon nauseating medicines. Four grains of ipecacuanha powder, in a little warm water every quarter of an hour until vomiting is produced, and should be kept up at intervals of two or three hours. Sometimes a state of coma or collapse follows this treatment, and then it is necessary to give stimulants; carbonate of ammonia in five-grain doses, or sal volatile, half a teaspoonful about every hour. These are preferable to alcoholic stimulants; but should they not succeed, brandy may be tried, with strong beef-tea. Should the urgency of the symptoms yield to the emetics, a milder treat-

ment may be followed out. The following is a good mixture: Ipecacuanha wine, 1 dram; aromatic spirit of ammonia, 2 drams; carbonate of potash, 1 dram; water, 8 ounces. Two tablespoonfuls to be given every four hours. If the cough is troublesome, add a grain of acetate of morphine. The diet should be light and nourishing, and all exposure to cold must be carefully avoided. In children, acute bronchitis does not commonly produce such marked effects as in adults, although sometimes it is extremely rapid and fatal, allowing little time for the action of remedies, which should be much the same as those above recommended, with proper regard, of course, to difference of age. If the child is unweaned, it must be allowed to suck very sparingly, if at all. The best plan is to give it milk with a spoon, or feeding-bottle, as the quantity can be thus better regulated. Great attention must be paid to the bowels, and also to the temperature of the air breathed by the little sufferer. A blister on the chest, about as big as a large copper cent, may be sometimes applied with advantage if the hot bran does not give the desired relief.

Winter coughs, catarrh, and asthma are very commonly but forms of chronic bronchitis. For the troublesome coughs which almost invariably attends confirmed bronchitis, and especially in the aged, opium is the most effectual remedy. The best form of administration is perhaps the compound tincture of camphor taken with ipecacuanha or antimonial wine—say half a dram of the former, with ten grains of either of the latter, in a little sugar and water or flaxseed-tea. If there are febrile symptoms, add fifteen minims of sweet spirits of nitre to each dose.

It is especially during the spring months, and when there is a prevalence of east wind, that bronchitis attacks young and old, often hurrying the former to a premature grave, and making the downward course of the latter more quick and painful. With aged people, in such cases, there is commonly a great accumulation of mucus in the bronchial tubes, which causes continued and violent coughing in the efforts to expel it, which efforts are often unsuccessful. Thus the respiration is impeded; the blood, from want of proper oxygenization, becomes unfit for the purposes of vitality, and death, often unexpectedly sudden, is the consequence. Such bronchitic patients must be carefully treated—no lowering measures will do for them, but warm and generous diet; opium can not safely be ventured on. Warm flannel next the skin, a genial atmosphere, inhalation of steam —if medicated with horehound, or some demulcent plants, so much the better—a couple of compound squill pills at night,

and during the day a mixture, composed of camphor mixture, six ounces; tincture of squills, wine of ipecacuanha, and aromatic spirits of ammonia, each two drams; with perhaps two drams of tincture of hops. Take a tablespoonful every three or four hours.

Cancer.—A cancer is an ulcer of the worst kind, with an uneven surface, and ragged and painful edges. It spreads in a very rapid manner, discharges a thin acrimonious matter, and has a very fetid smell.

Causes.—It is found that persons of scrofulous constitutions are most liable to this complaint, it arises most frequently from a blow, or some other external injury, but now and then from previous inflammation, also by suppressed evacuations. Women are more liable to it than men, especially the latter about the change of life.

Symptoms.—It mostly is about the glands or glandular structure, the breast, nose, &c., externally; internally, the liver, womb, &c. It first appears a hard tumor, of about the size of a hazel-nut, which remains stationary awhile, then it begins to enlarge, shoots out roots; the color of the skin begins to change, first red, afterwards purple, then livid, and at last black; shooting excruciating pains; the place enlarges, until at last it bursts, then a little ease is got; but if the disease is not now stopped, the place extends until it bursts some blood-vessels, or reaches some vital part and destroys life. Therefore immediate means should be taken to cure, wherever cancer is found to exist, even in the most incipient form.

Treatment.—Diet light but nourishing, avoiding salted or highly seasoned provisions, or strong liquors. In all cases of *Schirrus* or *Unbroken Cancer*, try to disperse it without breaking, if possible. Use the following: Hydriodate of potash, 1 dram; fresh lard, 3 ounces.

Mix well; rub on the size of a hazel-nut twice a day for a fortnight; then cease for a week, and apply a poultice of figs boiled in milk, for three or four days; then apply the ointment again, and continue doing so. This has disposed of many suspicious tumors. Take internally the following: Calomel, 1 scruple; emetic tartar, 6 grains; precipitated sulphuret of antimony, 2 scruples; gum guiacum, 2 drams; conserve of hops, sufficient quantity.

Rub well together, and divide into forty pills. One to be taken every night, and the following in the daytime: Compound infusion of gentian, 12 ounces; tincture of calumba, 1 ounce; carbonate of ammonia one dram.

Mix. Take three tablespoonfuls three times a day. After taking this for a week, substitute the following pills instead of the draught: Oxyphosphate of iron, ½ ounce; compound ipecacuanha powder, 1 scruple; powdered aloes, 6 grains; mucilage of gum arabic, sufficient quantity.

Mix, and divide into sixty pills. Take one three times a day. If those methods of treatment (which must be persisted in for some time) do not succeed, and it becomes a broken cancer, the internal remedies may continue the same. Apply a carrot poultice, or the following will be good: Dried hemlock, 1 ounce; camomile flowers, 1 ounce; boiling water, one pint.

Boil ten minutes, and add to the strained decoction linseed-meal in sufficient quantity to make a poultice; oil well, and apply warm twice a day. Continue this occasionally, till the diseased parts are destroyed. In all cases keep the place covered with dressings, with oiled silk or sheet of gutta percha, to keep the air off. In internal cancer, in addition to the preceding internal remedies, either or both of the following may be taken alternately with the second and third of the above formulas: Guiacum wood raspings, 3 ounces; raisins stoned, 2 ounces; sassafras shavings, 1 ounce; liquorice root, sliced, ½ ounce.

Boil the guiacum and raisins in a gallon of water, until it is reduced to five pints, then put in the sassafras and liquorice, and continue boiling until reduced to four pints; then strain, leave to settle till clear. A pint may be taken daily, at about four times.

Canker of the Mouth.—This is a gangrenous inflammation which chiefly affects the cheeks and gums of children of a weakly, scrofulous habit, with constitutions debilitated by want of wholesome food, impure air, and all the bad influences of poverty and wretchedness, which surround so many of the poorer classes.

Causes.—Canker may be produced by the contact of copper or brass with the inside of the mouth. It is very often attributed to mercury, but this can only when given in large doses contribute to its development. Its most frequent cause is weakness and debility, combined with a scrofulous or diseased body. Very frequently the disease shows itself soon after measles, scarlet fever, or other acute inflammatory affections.

Symptoms.—Its first symptom is usually a hard red spot on the cheek, which spreads and opens into a shallow ulcer on the inside, discharging matter of a peculiarly offensive character. As the disease progresses, the cheek swells, the breath becomes fetid, there is a great flow of saliva, which is often tinged with

blood; there is mortification of the surrounding parts, including the gums; the teeth drop out, typhoid symptoms show themselves, and, finally, the patient sinks exhausted, death coming like a happy release from its sufferings. This is the usual course, if early efforts are not made to arrest the progress of the disease.

Treatment.—As soon as the red spot in the cheek gives warning of its commencement, the constitution should be strengthened with good nourishing diet, such as beef-tea, milk, and eggs, if the stomach will bear them; wine, if there is extreme debility, and no great amount of fever; quinine, in half-grain doses three times a day, in infusion of gentian or decoction of bark, may be given, or some preparation of iron with a warm stomachic, as the following: Wine of iron, 2 drams; compound tincture of cardamums or of valerian, 2 drams. Made up to eight ounces with cinnamon or mint water; one or two tablespoonfuls twice or thrice a day. Change of air, sea bathing, and anything which is likely to invigorate the constitution should also be tried. Chlorate of potash, 1 dram, with twenty drops of muriatic acid, in six ounces of water, sweetened with a little syrup of orange-peel, is a pleasant and serviceable mixture. It may be given to a child six years of age, a tablespoonful every four hours. For local treatment, lunar caustic, or sulphate of copper, rubbed along the edges of the wound, are recommended. The mouth should be frequently washed with a lotion made of chloride of soda and water, in the proportion of two drams of the former to half a pint of the latter; or it may be, one dram of chloric ether to the same quantity. By this means the unpleasant fetor is diminished so as to be endurable. When extensive ulceration and sloughing takes place outwardly, poultices must be applied.

Catalepsy or Trance.—A spasmodic seizure, which causes a rigidity of the limbs, retaining them in a certain position, however inconvenient or painful.

Causes.—The causes of this disease are seldom local, but such as affect the whole system; catamenia, worms, and painful emotions of the mind, or impaired digestion, may be mentioned as among the most frequent; women are more subject to these attacks than men; and, sometimes, they result in apoplexy, epilepsy, or melancholia.

Symptoms.—The symptoms are a sudden deprivation of all power of motion and sensation; the patient remaining in precisely the same position as he was when seized: the attack comes on suddenly, without any warning, except, it may be a slight languor of body and mind, and lasts for several minutes,

or perhaps hours, although the longer period is rare; if, during the fit the position of the limbs is altered, they will remain as placed, and when the paroxysm is over, there will be generally no consciousness of what has transpired while it lasted; in this respect it resembles the mesmeric sleep, or the state of insensibility produced by the inhalation of ether or chloroform.

Treatment.—The treatment must depend upon the probable cause; if the patient is of a plethoric habit, cupping at the back of the neck, blisters, a seton or an issue, with the administration of cathartics; if debilitated, tonics and anti-spasmodics must be given. During the attack apply mustard plasters to the palms of the hands and soles of the feet, pit of the stomach and spine; cold water may be dashed in the face, if the fit continue long, and strong ammonia applied to the nostrils: a mixture of ether, fetid spirits of ammonia, and tincture of musk, 2 drams of each to 8 ounces of peppermint water, should be administered in ounce doses every quarter of an hour or so. On recovery, the system should be strengthened as much as possible with good diet, gentle exercise, sea bathing, or the cold shower-bath; chalybeate waters may also be drank with advantage, or preparations of steel, bitter infusion, or cascarilla with aromatic spirits of ammonia.

Cataract.—A disease of the eyes, causing opacity of the crystalline lens, which prevents the passage of the rays of light, and so produces blindness.

Symptoms.—A dimness and mistiness of vision, which may generally be noticed before any opacity can be perceived on the lens itself. Then there are optical illusions, like specks or motes floating before the eye. This is succeeded by the gradual falling, as it were, of a curtain upon the outward view, which is finally obscured altogether. Sometimes the progress of the disease is slow and gradual, but frequently it is rapid, especially in the latter stages. Persons who have passed the middle age are most likely to be affected by it, and sometimes it has made considerable progress in one eye before the patient is made aware of it by some accidental circumstance, which for a time prevents the use of the other.

Treatment.—There is no medicinal remedy that is known to have any effect upon this disease; nor is it at all likely, from the structure of the parts, that any such remedy exists. All palliative measures, therefore, are confined to attention to the general health of the patient, and the removal of any inflammatory symptoms that may exist along with it. The only mode of

cure is actual removal by an operation; but so long as one eye remains unaffected, the operation may be delayed.

Catarrh.—Catarrh, or cold in the head, is the most common of all the disorders to which the human body is subject, more particularly in variable climates, like our own. There are two kinds of this disease, the one a common cold; the other, influenza or epidemic cold. A common catarrh is an inflammatory state of the mucous membranes of the head or chest, in the former case it is called cold in the head, or coryza; in the latter, cold on the chest, or bronchitis.

Causes.—The common cause of this disease is exposure to cold or damp atmosphere, or to draughts, especially when the surface of the body is warm or perspiring. It is frequently occasioned by passing directly from a warm into a cold atmosphere, and, we believe, even more frequently by passing immediately from a cold into a warm atmosphere. Indeed, any sudden atmospheric change is apt, in delicate persons, to produce cold but in passing from a warm room to the cold air, people generally take some care, though they are not generally aware that the like danger attends passing directly from the cold air into a heated room, and hence do not provide against it.

Symptoms.—The symptoms of a cold in the head are a sense of uneasiness, heat, and stuffing in the nostrils, diminution or loss of smell, dull heavy pain in the forehead, inflamed eyes, sneezing, and a slight impediment in breathing. Generally, it extends also to the throat and chest, occasioning hoarseness, cough, and difficulty of breathing. Frequently there is also a general derangement of the system, loss of appetite, lassitude, chilliness, succeeded by dry, feverish heats, and stiffness of the joints. The nostrils discharge a fluid, at first thin and acrid, but which afterwards becomes thicker, and often purulent.

Treatment.—The treatment of a common cold is usually a simple matter. Confinement to the house for a day or two, a warm foot-bath, diluent drinks, abstinence from animal food and vinous or other fermented liquors, and a dose or two of some gentle laxative, are usually sufficient to remove the disease. There is also what is called the *dry* method of cure, which has the advantage of not requiring confinement to the house, though otherwise some might be inclined to regard the cure as worse than the disease. It consists simply in abstinence from every kind of drink, no liquor, or next to none, being allowed until the disease is gone. Dr. Williams, its inventor, states that the necessary privation is not hard to bear, and that a cure is effected, on an average, in forty-eight hours. He allows, without

recommending, a tablespoonful of tea or milk for the morning and evening meals, and a wineglassful of water at bed-time. The principle acted upon is that of cutting off the supply of watery materials to the blood, and thus leaving nothing to feed the secretion from the inflamed mucous membrane. The best preventive against cold is the daily use of the cold bath, and this is the best means that can be adopted by those who have an habitual tendency to this disease. It should, however, be begun in summer, and the water ought to be at first tepid; but, after being begun, the practice may be continued throughout the winter,

Chronic Catarrh. *(Ulceration of the Nose).*—This is usually the result of neglected common catarrh, and is exceedingly troublesome, lasting sometimes for years.

Symptoms.—When the inflammation has continued, and ulceration taken place, matter is secreted, which falls down into the throat. This is one of the worst features of this disease, as the matter often finds its way into the stomach, causing a general derangement of the system. In the morning, on rising, great difficulty is experienced in clearing the head and throat. The smell is impaired, and sometimes destroyed. Loss of appetite and general emaciation frequently occur.

Treatment.—The treatment consists chiefly of local washes or injections. If no syringe or douche is at hand, they may be snuffed up the nose. A solution of chloride of potassa, soda, or lime, is highly recommended, where the discharge is offensive. An injection composed of acetate of lead, sulphate of zinc, sulphate of copper, or nitrate of silver, has been found very beneficial, as has also the inhalation of the vapor of creosote, tar, and vinegar. Common salt is also a good remedy. Alum has been known to arrest the most violent attack in a few minutes. Place about half a dram in the mouth and let it dissolve gradually; swallowing a little occasionally.

Eclectic or Herbal Treatment for Catarrh.—Promote a free perspiration, by taking every night warm hoarhound or boneset tea, which may be drank cold during the day; if the cough is troublesome, take a tea made of slippery-elm bark, or flaxseed. Add a little lemon-juice, and sweeten.

The following is also an excellent remedy for a cough: Take the yolk of two fresh eggs; beat them up well in a basin; then add quarter pound of moist sugar, and beat them together. Take another vessel; mix a wineglassful of white-wine vinegar and the juice of two large lemons. Stir all these ingredients up; mix them and put the whole into a bottle and cork it close. It

is fit for use at once. Take a tablespoonful when the cough is troublesome.

Chapped or Cracked Lips.—The lips are often chapped and cracked by exposure to cold, and it is sometimes a difficult matter to heal them. The following is a good form for lip-salve to be used in such a case : White wax, 2½ ounces; spermaceti, ½ ounce; almond oil, 3 ounces. Melt together, stir well, and put by to cool; apply to the lips on going to bed at night. It may be made of a pretty pink color by tinting the oil first with a small piece of alkanet-root, which should be taken out before the other ingredients are introduced. When the lips heat and burn much, a little cold cream will be found a pleasant and serviceable application.

Chilblains, are an inflammatory affection of the skin, generally confined to the extremities, and especially the fingers and toes. Exposure to sudden alternations of heat and cold usually gives rise to these troublesome visitations, which are rather characterized by itching and irritation than pain. Persons of scrofulous habit and languid circulation are most subject to them, as are children and aged persons. It is a popular fallacy, that to keep the surface of the skin in a state of unnatural warmth, by hot bottles and woolen socks by night, and fur linings and feet-warmers by day, is the best way to prevent chilblains; but this only serves to keep up a constant perspiration, and so weakens the tone of the system, and increases the liability to them. A nightly foot-bath of cold, or—for aged persons—of tepid salt and water, with plenty of friction with a rough towel, and exercise during the day, will be most likely to keep chilblains from the feet; and for the hands, a careful rubbing so as to get them carefully dry after every washing or dipping in water, and an avoidance of all unnecessary exposure to severe cold, are the best preventive measures. It is a good plan to have a pan of oatmeal always at hand, and to rub them well over with that after they have been wetted, and wiped as dry as possible. This will absorb any moisture left by the towel, and have a softening and cooling effect. Bathing the feet and hands every night in warm water in which a small quantity of salt is dissolved is one of the best preventives against chilblains.

Treatment.—Should chilblains come, as sometimes they will, in spite of all precautions, let them be gently rubbed every night and morning with some stimulant application; alcohol, spirits of turpentine, or camphorated spirits of wine are all good for this purpose; but the application which we have found most efficacious is a lotion made of alum and sulphate of zinc—

2 drams of each to half a pint of water, rubbed in warm: it may be made more stimulating by the addition of 1 ounce of camphorated spirits. When the chilblains are broken there must be a different course of treatment; the ulcers formed are often difficult to heal, especially in weakly and ill-conditioned persons; there is generally a great deal of inflammation, which must be subdued by means of bread and water poultices applied cold, and afterwards by cooling ointments, such as the cerate of acetate of lead, or spermaceti ointment, with 40 drops of extract of Goulard added to the ounce; should there be a disposition to form proud flesh, the ointment of red precipitate should be used.

Chicken-Pox *(Varicella).*—Chicken-pox is a very mild form of eruptive disease, which affects a person but once in a lifetime, and which can generally be traced to specific contagion or infection; it is mostly confined to children.

Symptoms.—It is preceded—in most cases, but not in all—by slight fever, which lasts for one or two days before the eruption appears, which at first is in the form of conical pimples with a white head, mostly on the shoulders, breast, and neck, and more sparingly over the face and body generally. These vesicles, on the second day, appear like little globular blisters, but with little or no surrounding inflammation; they now become filled with a watery fluid, which is not converted into pus, as in small-pox—to the milder kind of which this disease bears some resemblance—and, about the fifth day, the bladders shrivel up and dry away, leaving only crusts or scales. The main distinctions between chicken-pox and small-pox are the absence or extreme mildness of the premonitory fever in the former disease, and the form and contents of the vesicles; those of the latter eruption being filled with dark matter, and having, invariably, a depression in the centre.

Treatment.—On the first appearance of the eruptions, the patient should be put upon spare diet; this, and a dose or two of some cooling aperient, as rhubarb or magnesia, is generally all that is necessary; but should the febrile symptoms run high, give a saline draught, as the following: Carbonate of potash, 1 scruple; citric or tartaric acid, 15 grains; essence of cinnamon, ½ a dram; syrup of orange peel, 1 dram; water, 10 ounces. Shake, and drink while sparkling a wineglassful as a refrigerant. To make it effervescing, add the acid after the draught is poured out. Give plenty of cooling drink, and, if the bowels are at all obstinate, emollient injections. Care must be taken that the skin is not irritated by scratching—as it is, painful and trouble-

some sores may be produced—and also that the patient does not take a chill. If these precautions are observed, little or no danger is to be apprehended from chicken-pox.

Asiatic Cholera.—The Asiatic, malignant, or pestilential cholera is a very violent form of disease. It commonly comes on without any warning, and the patient is frequently a corpse in a few hours.

Causes.—It depends upon a peculiar condition of the atmosphere, not very well determined. Crowded towns and cities are the most liable to its ravages, as are also low and damp situations. It may be caused by eating improper food, intoxication, sensual habits, or anything that undermines the general health. Fear will also cause it.

Symptoms.—The attack usually begins with sickness and purging; the discharge in this case not being bilious, but a thin, colorless fluid, like rice-water, accompanied with great prostration of strength and cold, clammy sweats. In a short time dreadful cramps assail the extremities, and afterwards the abdomen and other parts of the body. The body becomes bent, the limbs twisted, the countenance cadaverous, the pulse almost imperceptible, the eyes sunken and surrounded by a dark circle; the patient sinks into a state of apathy, and unless a favorable change speedily takes place, he soon expires. When reaction does take place, the pulse gradually returns, the natural warmth of the body is restored, and the spasms and difficulty of breathing give way. Frequently, however, the reaction is accompanied by fever, closely resembling typhus, and which often terminates fatally, in from four to eight days.

Treatment.—In regard to the treatment of cholera the views of medical men have of late somewhat changed. Watson, who has recently modified the views expressed in the last edition of his lectures, says, that "one important and guiding rule of treatment is not to attempt by opiates or by other directly repressive means to arrest a diarrhœa while there is reason to believe that the bowel contains a considerable amount of morbid and offensive materials. The purging is the natural way of getting rid of the irritant cause. We may favor the recovery by directing the patient to drink copiously any simple diluent liquid—water (cold or tepid), toast-water, barley-water, or weak tea; and we may often accelerate the recovery by sweeping out the alimentary canal by some safe purgative, and then, if necessary, soothing it by an opiate." A tablespoonful of castor oil may be given for this purpose, and, after the oil has acted freely, "a tablespoonful of brandy may be taken in

some thin arrowroot or gruel, and if there be much feeling of irritation, with a sense of sinking, from five to ten drops of laudanum may be given in cold water. These means will suffice for the speedy arrest of most cases of choleraic diarrhœa. If the diarrhœa has continued for some hours, the stools having been copious and liquid; if there be no griping pain in the bowels, no feeling or appearance of distension of the intestines, the abdomen being flaccid and empty, and the tongue clean, we may conclude that the morbid agent has already purged itself away," and there will be no need for any purgative, but the brandy and laudanum may be given immediately as above. "The rule in all cases is not to give the opiate until the morbid poison and its products have for the most part escaped, not to close the door until the 'enemy' has been expelled. In some cases of severe and prolonged diarrhœa it may be necessary to repeat the oil and the laudanum alternately for more than once at intervals of three or four hours." If the diarrhœa be associated with vomiting, this should be encouraged, and assisted by copious draughts of tepid water. If there be nausea without vomiting an emetic may be given. The following preparation has been found very useful: chalk mixture, one ounce; aromatic confection, ten to fifteen grains; tincture of opium, ten to fifteen drops. To be taken every three or four hours until looseness ceases.

Eclectic or Herbal Treatment for Cholera.—Dr. Annesley, who had much experience in India with this epidemic, states that, if taken at its commencement or within an hour after its attack, it is as manageable as any other acute disease; but the alarming rapidity with which it runs its course, demands the most active treatment. The loss of an hour may prove fatal to life. As soon as the person is attacked, at once place him in a warm bath, and while there bleed from the arm. Let not less than twenty or thirty ounces of blood be taken. Then put him quietly into a warm bed. Mustard plasters should be applied to the feet, and brandy or other spirits should be administered to stimulate the system. The body should be frequently rubbed with a warm flannel sprinkled with a little starch or camphorated oil. If the stomach is too weak to bear spirits, give a strong decoction of cloves or cinnamon, or of ginger, or Cayenne pepper, a teaspoonful every half hour.

The following has been very effectual in curing severe cases of virulent cholera: Tincture of opium, tincture of camphor, and spirits of turpentine, of each three drams; oil of peppermint, thirty drops; mix. Dose, one teaspoonful in brandy and water, for the mild form of cholera; and one tablespoonful for the more

virulent. As a preventive the following may be taken in cholera times: Bicarbonate of soda, 1 scruple; ginger, 8 grains. Take in a glass of water, after breakfast and supper.

Cholera Morbus.—This is a disease prevalent in warm weather. From the great amount of bile secreted, it is also called Bilious Cholera.

Causes.—Excessive heat, sudden atmospheric changes, indigestible food, unripe fruits. Dampness, wet feet, and violent passions will also cause it.

Symptoms.—This disease begins with sickness and distress at the stomach, succeeded by violent gripings, with vomiting of thin, dirty yellowish, whitish, or greenish fluid, with discharges from the bowels similiar to that vomited. The nausea and distress continue between the vomiting and purging, and the pain at times is intense. The pulse is rapid, soon becoming small and feeble, the tongue dry, the urine high-colored, and there is much thirst, though no drink can be retained on the stomach.

Treatment.—Apply a large mustard poultice over the stomach and liver. Give large draughts of warm teas, by which means the stomach will be cleansed of all its solid contents. Every half hour give tablespoonful doses of the compound powder of rhubarb and potassa, until the vomiting is checked. Warm injections must be given frequently, and hot bricks applied to the feet, while the whole body should be swathed in warm flannels. To get up a warmth of the body and the stomach is, in fact, the most important thing in this disease. Hot brandy, in which is a dose of cayenne, is excellent to quiet the vomiting and griping. A few drops of laudanum in the injections may be given, if the pain is excessive; but generally it is not needed.

Either of the following have been found useful: Bicarbonate of soda, 12 grains; common salt, 6 grains; chlorate of potash, 6 grains. Mix, and take in cold water. Or the following: Acetate of lead, 20 grains; opium, 12 grains. Make into 12 pills, and take one every half hour until looseness ceases.

Eclectic or Herbal Treatment for Cholera Morbus.—No time must be lost in treating the severe stages of this disease. Give the patient copious drinks of whey, warm barley-water, thin water-gruel, or weak chicken-broth. Bathe the feet and legs in warm saleratus-water, and apply warm fomentations of hops and vinegar to the bowels. In addition to these, apply a warm poultice of well-stewed garden-mint, or a poultice of mustard and strong vinegar will be found of much service. The vomiting and purging may be stopped by the following: Ground black pepper, 1 tablespoonful; table salt, 1 tablespoonful; warm water,

½ tumblerful; cider vinegar, ½ tumblerful. Dose, a tablespoonful every few minutes. Stir and mix each time until the whole is taken.

The evacuations, however, should not be stopped till the patient feels very weak. Nourishing diet should be taken by the patient. A wineglass of cold camomile tea once or twice a day would be very beneficial, as would ten drops of elixir of vitriol three or four times a day, or a tea made of black or Virginia snake-root. Flannel should be worn next the skin, and the warm bath should be frequently resorted to.

Inflammation of the Pharynx, or Clergyman's Sore Throat (*Pharyngitis*).—This is an inflammation of the back part of the throat, as seen when the mouth is stretched open. There is also an inflamed condition of the vocal cords, and other portions of the larynx.

Causes.—Over-exertion of the voice, inhaling impure air, exposure to cold winds when heated will also produce it.

Symptoms.—Spitting, hoarseness, coughing, sometimes loss of voice, difficulty of swallowing, etc.

Treatment.—Avoid the night air, and loud talking or singing in the open air when walking. Let the diet be nourishing, but abstain from all spicy and acid foods that irritate the mucous membrane. Spirituous liquors, strong beer, and other heating liquids, must be entirely avoided. The local treatment consists of applying solutions of nitrate of silver, or alum, or carbolic acid, to the diseased parts, by means of a sponge or brush.

Colic.—Colic is a name given to several diseases which are characterized by severe pain of the bowels, with distension or flatulence, but without looseness or diarrhœa. Medical men distinguish no fewer than seven different kinds of this complaint; as, 1, Spasmodic, in which the principal symptoms are sharp and spasmodic pains about the navel; 2, Stercoraceous, when the pain is accompanied with constipation of the bowels; 3, Accidental, when occasioned by indigestible food, or by acrid matter in the intestines; 4, Bilious, when accompanied with vomiting of bile, or with obstinate costiveness; 5, Flatulent, when it arises from flatulence in the bowels; 6, Inflammatory, when accompanied with heat and inflammation; 7, Lead, Painters', or Devonshire colic, the dry bellyache, which is attributed to the poison of lead.

Causes.—Among the most frequent causes may be named worms, poisonous or unwholesome substances, long undigested food, redundancy of vitiated bile, internal gout and rheumatism, intense cold, hard or acid fruits or vegetables.

Symptoms.—The symptoms of colic, in general, are a painful distension of the lower region of the belly, with a twisting round of the navel, and very commonly vomiting, costiveness, and spasms.

Painters' Colic.—Lead, or painters' colic is characterized by obstinate costiveness, and vomiting of acrid bile; the pains come on in paroxysms. The spasms gradually become more violent, and if not frequently alleviated, the bowels become perfectly intractable.

Treatment.—Give immediately from thirty to forty drops of laudanum, and apply a hot bath; afterwards give the following mixture: Sulphate of magnesia, one ounce; powdered alum, two drams; tincture of opium, half a dram; water, six ounces. Dose, one-fourth every four hours.

For the treatment of paralysis, or palsy arising from the absorption of lead, which is generally confined to the wrists, use galvanism, friction, and shampooing, with chalybeate waters. Those engaged in the manufacture of lead, or in occupations in which one or other of its preparations are frequently handled, may generally escape its baneful effects by strict attention to cleanliness. They should never take their meals where they work, or with unwashed hands. Let them eat fat meat, and butter, and take acidulous drinks, especially those rendered so by sulphuric acid. The men employed at the Birmingham white lead works have been almost free from this disease, to which they were much subject before, since they have mixed a little of the above acid with their molasses-beer. From the first attack of lead colic patients generally recover; but unless they change their occupations, or observe the above precautions with scrupulous care, the attacks are repeated, each time with greater violence, and they will become, eventually, miserable cripples.

Wind Colic.—Wind colic is a severe and distressing pain in the bowels, sometimes a stoppage, and swelling about the pit of the stomach and the navel. The complaint may be caused by weakness in the digestive organs, by indigestible food, unripe fruit, or costiveness.

Treatment.—If the pain is caused by having eaten anything indigestible, an emetic should be immediately taken. If this does not bring relief, a dose of salts, or sweet tincture of rhubarb may. If there is no sickness at the stomach, a little essence of peppermint in water, or brandy, or gin, in hot water, may be sufficient to expel the wind and give relief. If there be costive-

ness, and continued pain, a stimulating injection should be given.

Bilious Colic.—Bilious colic is a dangerous disease. There is griping, twisting, tearing pain about the navel, or sometimes over the whole belly.

Causes.—It is caused by irritating articles taken into the stomach, vitiated bile, long exposure to cold, torpid liver and skin, great unnatural heat, etc.

Symptoms.—It comes and goes by paroxysms. Sometimes the abdomen is drawn in, at other times swelled out, and stretched like a drum-head. At first the pain is relieved by pressure, but after a time the belly grows tender to the touch. There is thirst and heat, and a discharge of bilious matter from the stomach. In the worst cases, the pulse is small, the face pale, the features shrunk, and the whole body covered with a cold sweat.

Treatment.—Administer an active purgative injection immediately. Give a mixture of pulverized camphor, four grains; cayenne, twelve grains; white sugar, one scruple. This, divided into four powders, and given once in fifteen minutes, will relieve the pain, at the same time a mustard-poultice should be laid upon the belly. The sickness of stomach may be allayed by hot drafts over the stomach, in which are a few drops of laudanum; also on the feet. Croton oil, one drop done up in a crumb of bread, will often purge successfully; or castor-oil and spirits of turpentine, equal parts, in two tablespoonful doses, may be used before trying the other. A warm bath is good, and bottles filled with hot water, placed at the feet and sides, to promote perspiration.

Eclectic or Herbal Treatment for Colic.—A good remedy for bilious colic is the tincture of ground walnut, made by stirring walnuts in sufficient diluted alcohol or whisky to cover them. Let the mixture stand eight or ten days. Dose, a tablespoonful every half hour until relieved.

A decoction of equal parts of skull-cap and high cranberry bark, to which is added a tablespoonful of the compound tincture of Virginia snake-root has been found very useful. Apply over the stomach and bowels hot fomentations of wormwood and boneset, or hops, stramonium leaves, or hops and lobelia.

In flatulent colic the legs should be bathed in warm water, and poultices of mustard or hot salt placed over the bowels and stomach. The bowels may be opened with a dose of castor-oil, and ginger or peppermint tea may be drank freely. To ease the pain, from thirty to sixty drops of paregoric may be given.

In very severe cases, a mixture compounded of equal parts of laudanum, tincture of camphor, and essence of peppermint, in teaspoonful doses, may be given. In some cases, a teaspoonful of spirits of turpentine, taken with a teaspoonful of castor-oil, has been found to give immediate relief. For painters', or lead colic, the following is highly recommended: Sulphate of magnesia, ½ pound; powdered alum, 1 ounce; sulphuric acid, 1½ drams; boiling water, 1½ pints. Mix. Dose, a tablespoonful in a wine-glass of water; repeat every hour until it operates upon the bowels. To prevent the acid from injuring the teeth, the solution may be sucked through a quill or a glass tube. After the bowels have been freely opened, the medicine should be continued for weeks or months, in doses sufficient to produce one or two passages every twenty-four hours. The sulphuric acid, by uniting with the oxide of lead in the system, forms the sulphate of lead, which is a harmless salt.

The following is recommended to be taken by persons who are exposed to the bad influence of lead: Elixir vitriol, ½ ounce; tincture of prickly ash berries, 1 ounce. Dose, a teaspoonful in a gill of water, and repeat three or four times a day.

Clouded, Thick, or Dark-colored Urine—Take the following antacid diuretic mixture: Liquor potash, two drams; tincture of cubebs, two ounces; infusion of buchu leaves, thirteen ounces; mix, take two tablespoonfuls four times a day.

The following will usually effect a cure: Dilute nitric acid, two drams; syrup of lemon, four drams; water, eight ounces; mix, take one tablespoonful three times a day; or take half a teaspoonful of citric acid in water four times a day.

Concussion or Inflammation of the Brain.—Is nearly always produced by a blow or a fall; it is one of the most frequent injuries to which this part is exposed; it may be either slight or severe, in proportion to the intensity of the exciting cause; in the former case the effect is but momentary—the patient is stunned, but very soon recovers consciousness, and perhaps feels no more of it, except a little tenderness of the part struck; in the latter case he remains unconscious, without the power to move or speak; the pulse is slow and feeble, the breathing difficult, frequently there is vomiting, and an unnatural contraction or dilation of the pupils of the eyes; in this case but little can be done beyond putting the patient to bed, and keeping the surface of the skin warm by frictions and hot applications; when there is extreme depression, a little brandy or sal volatile may be given, but very sparingly, because, if death does not ensue, there will be reaction, with an inflamed state of the organ. If it is simple

concussion, a fatal termination is not likely ; but sometimes the shock causes rupture of the substance of the brain itself, or its enclosing membranes, or of one or more of its blood-vessels, causing effusion ; in this case the patient may never rally from his state of stupor, or, if he does, it will be but for a short time ; there will probably be convulsions, paralysis, and apoplectic termination of his sufferings. All these are characteristic of inflammation. In so acutely sensible an organ as the brain, it must be evident that an inflamed state of the tissue is by all possible means to be avoided; hence, when reaction sets in after the stunning and depressing effects of concussion have passed off, the most active measures should at once be taken.

If a medical man is not within call, and the alarming symptoms increase in intensity, there may be sufficient warranty for an unprofessional person to bleed ; eight, ten, or twelve ounces of blood may be taken from the arm, or a dozen leeches may be applied about the head, or the patient may be cupped in the nape of the neck ; the latter is, perhaps, the best mode of depletion, as it is effected quickly, and very near to the seat of disease. The hair of the head should also be cut or shaved off, and rags wet with cold water applied, if iced, so much the better. A thorough purging should be given, as the following : Pulverized gamboge, 12 grains; pulverized scammony, 12 grains; elaterium, 2 grains; croton oil, 8 drops; extract of stramonium, 3 grains. Mix ; make 12 pills, and give 1 pill every three hours till it operates. To reduce the pulse and cause perspiration, give 4 drops of tincture of veratrum, in a little sweetened water, every hour, till the desired results are produced.

Among the symptoms of inflammation of the brain, or its investing tissues, may be mentioned as prominent : shivering, succeeded by heat in the skin; great thirst; tongue furred; pain in the head; intolerance of light; bloodshot eyes, with a wild, wandering look; sickness, and delirium. There may be violent and obstinate vomiting, as a first symptom, followed after a time by the others, or some of them. It should be borne in mind that concussion of the brain is not always the result of a blow; it may be produced by a violent shock to the nervous system, such as that caused by coming down heavily on the feet from a leap.

Congestion.—Applied to undue fullness of the blood-vessels; those of the brain are most usually so affected, owing to the unyielding nature of the bones of the cranium, which do not admit of expansion for any increased quantity of blood which may flow in. Most of the other important viscera are contained in cavities with yielding walls, and in them a greater fullness of the veins

than usual is not generally attended with such dangerous effects.

Causes.—Congestion may be anything which impedes the whole circulation so as to increase the action of the heart; any pressure on the veins which obstructs the passage of the blood through them; a dilation of the coats of the veins from debility; cold applied to the surface of the body, or a dry state of the skin; a decay of the cells in the small secreting cavities, blocking them up, causing local congestion, which, if not relieved, may lead to that of the whole system. It is caused by morbid accumulation of blood in the vessels, and may proceed from various causes; persons of a full, plethoric habit are most subject to it.

Treatment.—Quiet both of mind and body, with cooling aperient medicines, abstinence from all rich and stimulating food and drink, is the proper treatment; in those of spare, weakly habit, it is sometimes owing to want of vital energy, and in this case, the diet should be rich and stimulating; and the aperients, if required, must be of a cordial nature; but all this should be left to the medical practitioner; the disease too nearly affects the issues of life and death, to be tampered with.

Convulsions, or Fits.—Involuntary contractions of the muscles of a part or the whole of the body—generally with corresponding relaxations, but sometimes with rigidity and tension; in the former case they are called clonic spasms, as hysteria; in the latter tonic spasms, as lockjaw; when the convulsions are slight and rapid they are called tremors. They are universal, affecting all the limbs more or less, and the muscles of the face and those of respiration, as in epilepsy, and the convulsions of children; and partial when they only affect some of the muscles irregularly, as in chorea or St. Vitus' dance.

Causes.—Convulsions in children are generally caused by the lodgment of acrid matter in the intestines, flatulency, the irritation of teething, worms, water on the brain, the striking in of a rash, or the accession of some disease, such as small-pox, scarlatina, etc. A very trifling functional derangement will often be sufficient to produce them, and the younger and the more irritable the child is, the more liable will it be to their attacks.

Symptoms.—Convulsions are violent spasmodic affections, with or without intermission. Previous to their coming on there is generally giddiness, coldness of the extremities, dimness of vision, tremblings, and a creeping chill up the spine. There are also, particularly in adults, anxiety of mind and dejection of spirit, nausea, and a sense of faintness, yawning, and a feeling

of stretching, swimming in the head, and palpitation of the heart. When the fit is on, the teeth chatter, the tongue is protruded and often bitten, there is foaming at the mouth, the eyes roll wildly, there is a struggle for breath, and a clutching of the hands, which are often clenched so that the nails enter into the flesh; sometimes the lips and cheeks and the whole surface of the face and arms become purple, and the veins stand out as though they would burst; and so great is the muscular force exerted that several attendants are required to keep the patient from bodily injury. A violent paroxysm may last but a few minutes only, or for several hours, and may have longer or shorter intermissions. It is followed by extreme languor, frequently by headache and giddiness, but these often pass off very quickly, and leave no symptoms of constitutional derangement whatever.

Treatment.—Treatment will depend greatly on the cause. If it be worms, give vermifuges and anthelmintics; if teething, scarification of the gums; if improper food and indigestion, a gentle emetic and afterward an aperient; if acrid matter in the bowels, a laxative clyster and aperient; if flatulency, carminatives; if repelled eruptions, the warm bath; if effusion on the brain, cold lotions to the head, and small doses of calomel, frequently repeated, with purgatives, if the bowels are sluggish; hot applications to the extremities, also, are advisable in this case, and sometimes leeches to the head; but it is hazardous to apply them, except under professional direction. In all cases of infantile convulsions, and in some of adults, the warm bath is advisable; the temperature should be about ninety-eight degrees, and in most cases opening medicines, with at least one dose of calomel put on the tongue.

In adults, convulsions may be apoplectic, epileptic, hysterical, or puerperal, as the case may be. Some narcotic poisons produce them, such as opium, prussic acid, some kinds of fungi, ardent spirits, and indigestible substances. In all these cases, emetics should be the first remedies, and the stomach-pump; then volatiles and stimulants, as ammonia, valerian, and a stream of cold water poured upon the head from a considerable height. Convulsions may be caused by excessive mental emotion, and sometimes by long-continued diseases, such as dropsy, jaundice, and fever.

When a person is taken with a fit, proceed thus: Loosen any part of the dress which may appear tight, especially about the neck and chest; if a female, cut the stay-lace, as tight-lacing often causes fits; sprinkle cold water on the face, and ap-

ply volatile stimulants to the nostrils; rub the temples with eau de cologne, ether, or strong spirit of some kind, and blow upon them; and as soon as the patient can swallow, give 30 drops of sal volatile in water, or the same of ether, or, if neither are at hand, a little cold brandy and water.

When the fit is over, a gentle aperient should be taken, to be followed by cold bathing, exercise, and, if possible, by a change of air.

Consumption.—Phthisis, or consumption, is a disease which, unfortunately, is but too prevalent and fatal in this country, as in most others. It spares neither age nor sex, and its attacks, at first so insidious as almost to escape notice, but too frequently lead to a fatal issue. It is the result of the formation and development of tubercles in the lungs. These first appear in the form of small, gray, semi-transparent granulations, which gradually enlarge and become opaque, and after a time empty themselves into the bronchial tubes, and thus the substance of the lung is gradually destroyed.

Causes.—The causes of this disease are divided into remote and exciting. Of the former, the most important is hereditary predisposition. It is not, however, an actual cause of the disease; and hence there are many cases in which the children of consumptive parents do not fall a prey to this disease; but it renders those who are in that condition much more liable to be affected by the exciting causes. Whatever weakens the strength of the system, or interferes with the oxygenation of the blood, tends to the production of this disease. Hence living in bad air, insufficient and unwholesome food, and sedentary pursuits, tend to it. Among the more exciting causes are exposure to cold or damp, especially after the body has been heated, intemperance of any kind, profuse evacuations, and exposure to the reception of dust into the lungs, as in the case of certain artificers, needle-pointers, stonecutters, and the like.

Symptoms.—The earliest symptom of consumption that usually manifests itself is a short, dry cough, exciting no particular attention, being attributed to a slight cold. It, however, continues, and after a time increases in frequency. The breathing is more easily hurried by bodily motion, and the pulse becomes more frequent, particularly after meals and towards evening. Towards evening there is also frequently experienced a slight degree of chilliness, followed by heat and nocturnal perspirations. The patient becomes languid and indolent, and gradually loses strength. After a time the cough becomes more frequent, and is particularly troublesome during the night,

accompanied by an expectoration of a clear, frothy substance, which afterwards becomes more copious, viscid, and opaque, and is most considerable in the morning; the *sputa* are often tinged with blood; or hæmoptysis occurs in a more marked form, and to a greater extent. As the disease advances, the breathing and pulse become more hurried; the fever is greater, and the perspirations more regular and profuse. The emaciation and weakness go on increasing; a pain is felt in some part of the thorax, which is increased by coughing, and sometimes becomes so acute as to prevent the patient from lying on the affected side. All the symptoms increase towards evening: the face is flushed; the palms of the hands and soles of the feet are affected with a burning heat; the feet and ankles begin to swell, and in the last stage of consumption there is nearly always profuse diarrhœa. The emaciation is extreme; the countenance assumes a cadaverous appearance, the cheeks are prominent, the eyes hollow and languid. Usually the appetite remains entire to the end, and the patient flatters himself with the hope of a speedy recovery, often vainly forming distant projects of interest or amusement, when death puts a period to his existence. Tubercular deposits are also usually found in other organs of the body: the liver is enlarged and changes in appearance, and ulcerations occur in the intestines, the larynx, and trachea. These are so frequent and uniform as to lead to the belief that they form part of the disease.

Treatment.—It is of the utmost importance to be able to meet and counteract the earliest approach of this disease. The constitutions that are most liable to its attack are generally characterized either by a fair, delicate, rosy complexion, fair hair, clear skin, and great sensibility, or by dark complexion, large features, thick and sallow skin, and heavy general expression. The development of the disease is preceded by a peculiar form of indigestion, known as "strumous dyspepsia." It is specially characterized by a dislike of fatty food, sometimes also of sugar and alcohol, and is accompanied with heartburn and acid eructations after taking food. Unlike inflammation, tubercles almost invariably commence at the apex of the lungs, and it is here that they are usually most advanced. It is here, then, that the skillful physician, by means of auscultation and percussion, is able to detect the first direct symptoms of the incipient disease. The treatment of this disease is of two kinds, the one directed to strengthening the system for its prevention in those predisposed to it, or overcoming it in its incipient stages; the other to arresting its progress after the tubercles have mani-

fested themselves. The former class comprises a proper attention to the digestive organs, with wholesome diet, exercise in the open air, regular habits, attention to the skin, and, if necessary, change of air. The diet should be nutritious, but not stimulant, and the exercise not violent or too prolonged. Sea-voyages, or residence at the seaside, are generally found to be very beneficial; and, as a general rule, those places that are least subject to variations of temperature are recommended. The practice, however, of sending patients in the last stage of consumption away from home—to Minnesota, Florida, or elsewhere—cannot be too strongly reprobated. Of the more directly curative remedies unquestionably the most valuable is cod-liver oil. It should be taken in small quantities at first, probably a teaspoonful three times a day, during or immediately after meals; and the effect is greatly to improve the appearance of the patient, and to counteract the progress of the disease. If taken early, the tuberculous deposit may be arrested, and the patient restored to a state of health; and, even where this is not the case, the progress of the disease will at least be retarded. Tonic medicines, such as bark, sarsaparilla, iron, and iodine, are also very beneficial in the treatment of phthisis; at least in those cases where inflammation or much febrile excitement does not exist. Where inflammation already exists, it may be subdued by counter-irritants to the upper parts of the chest. These are the general remedies to be employed; the more prominent special features of the disease require particular medicines. One of the most distressing and harassing of these is the cough, which may be alleviated by the application of sinapisms or stimulating plasters to the chest, or by the internal use of mucilaginous mixtures, squills, conium, opium, ether, etc. The night perspirations, when very copious, are best checked by the use of mineral acids, as sulphuric acid given with quinine, or nitric acid in a decoction of sarsaparilla. Diarrhœa commonly subsides by a strict regulation of the diet, and the avoidance of all stimulating food and medicine; otherwise, small doses of chalk and opium, or rhubarb and opium, may be administered. When the pulse is very frequent and the palpitation distressing, digitalis may be used. The duration of this disease depends upon a great variety of circumstances, and varies from a few months up to four, five, or more years; the average, however, may be taken at about two years; but many of the cases terminate fatally between the fourth and ninth month. The question as to whether consumption be contagious has often been discussed, and medical men are by no means unanimous on the subject.

The majority are probably in favor of its being non-contagious; though there are not wanting weight and numbers on the other side, to which, indeed, the present writer believes that he has evidence for adhering. At all events, no one should be allowed to sleep with a consumptive patient after the disease has fully manifested itself.

Eclectic or Herbal Treatment for Consumption.—Abundance of fresh air; light, nutritious food, and correct personal habits, are the best remedies to rely on. All others will be useless if these matters are neglected. There can be no substitute for air and exercise. Let the exercise be gentle, so as not to cause fatigue, and take special care after exercising not to get cool too quick by standing still or sitting in a draught of cold air, open window, or cold room.

The cold or tepid bath should be used three or four times a week. Inhaling the fumes of tar made warm in a teapot is very useful. It will ease the violence of the cough, and produce a free discharge of the mucous matter. For night sweats, take sulphuric acid and nitric acid, of each one dram; mix in a cup of water; dose, a teaspoonful in a pint of sage tea. During the day, a strong camomile tea is very useful; as is a decoction of common polypody and liverwort, drank freely during the day.

A tablespoonful each of tar and honey beat up with the yolk of an egg and mixed with milk, and taken once or twice a day, is very good.

For females, especially when the menses are stopped, a wineglassful of decoction of elecampane once a day, has been found very useful. The diarrhœa may be checked by infusion of blackberry root.

Costiveness (*Constipation*).—An undue retention of the contents of the stomach, in which they are unusually hard, and expelled with difficulty and sometimes with pain.

Causes.—Neglecting the usual time in going to stool, extraordinary heat of the body, copious sweats, taking food that is dry, heating, and difficult of digestion; sedentary life, or a diseased state of the liver or spleen, sometimes from stricture in the rectum.

Treatment.—The first thing to be done is to establish the habit of trying to evacuate the bowels every day at a certain hour; the best time for most people is just after breakfast. It matters not if the bowels do not act; the practice of attempting should be persisted in, and in time it will break up the confined state of the bowels. Adopt a diet free from all astringents, taking care especially that there is no alum in the bread, and

using a coarser kind. Let the food consist of a due admixture of meat and vegetables for dinner; the beverage, water. For breakfast stale bread or dry toast, with a moderate quantity of butter, honey, fish, or bacon; cocoa is, perhaps, preferable to tea or coffee; and porridge made of Scotch oatmeal, probably better still. Regular exercise, either by walking or on horseback, should be taken. Roasted or boiled apples, pears, stewed prunes, raisins, gruel with currants, broths with spinach, leeks, and other soft pot-herbs, are excellent laxatives. If the above mode of living fail to relax the bowels, inject warm water by means of an enema. If there be an objection to the use of the foregoing, take of castor oil four parts, and of tincture of jalap, aloes, or rhubarb, one part; mix, and diligently rub over the region of the stomach every morning before rising; it should be done under the bed-clothes, lest the unpleasant odor should sicken the stomach. Or take either of the following: Take from half a dram to a dram of dilute nitric acid in a cupful of weak ginger or dandelion tea, twice or thrice a day. Epsom salts, half an ounce; powdered nitre one scruple; infusion of senna, four ounces; peppermint water, four ounces. Dose, two tablespoonfuls every morning.

Where the bowels are weak, uneasy, torpid, and where there is a general sense of coldness, and some aperient is absolutely required, have recourse to the following: Tincture of rhubarb, 2 drams; tincture of senna, 2 drams; potash water, or sal volatile, ½ dram. Mix in a wineglassful of camomile tea, and take it every day at noon, or an hour before dinner, gradually reducing the dose, or leaving it off by degrees. The habitual use of purgative medicines is very injurious, and increase the evil they are intended to cure.

Corns.—In the treatment of corns, the first object should be to remove the exciting cause; comfortable, well-fitting boots or shoes should be substituted for those of an opposite character, and the corn, after the feet have been soaked in warm water to soften it, should be pared carefully away, particular care being taken not to wound the more sensitive part. When the outer surface is removed, there will be perceived in the centre a small white spot, which should be carefully dug out with a pointed knife or a pair of scissors. When this too is removed, cover the seat of the corn with a small circular piece of thick, soft leather spread with soap or diachylon plaster, and leaving a small hole in the centre, corresponding with that from whence the root of the corn has been taken. Should any of this latter remain, so as to cause irritation, apply to it, every second

or third day, a piece of lunar caustic, scraped to a point, and slightly moistened. Some persons apply strong acetic or other acid; but this is not so effectual, and more likely to cause inflammation, which will be best allayed by a warm poultice of bread crumbs, moistened with Goulard water, the foot being held up as much as possible, and the system kept in a cool state with saline aperients, etc.

Soft Corns, which form chiefly between the toes, are often very painful and troublesome; let them be cut away as close as possible with a pair of scissors, and then dressed with rags wet with Goulard water, or a solution of sugar of lead; ivy leaves form, for such, a cool, pleasant protection from friction; they should be put on fresh every day.

Beneath the corner of the nail of the great toe a peculiar kind of corn sometimes occurs; it should be, cut or scraped out with the finger-nail, and caustic applied as above directed. Mere callosities of the skin on the hands and fingers are not corns, although often called so; they have no roots and are not painful, therefore it is best not to interfere with them; for if removed, others would come in their places, while the friction is kept up in which they originate.

Cornea, Ulceration of the—To relieve pain, bathe with a solution of the pith of sassafras. Give attention to the bowels, to delay the progress of the case until aid can be obtained.

Corpulence.—This, when it arrives at a certain height, becomes a real disease. The accumulation of fat about the kidneys and mesentery, swells the belly and prevents the free motion of the midriff, and so causes a difficulty of breathing.

Causes.—A free indulgence in good living, with an easy mind, indolent or sedentary life, are the causes of corpulence in any one whose constitution predisposes them to feed.

Symptoms.—The muscles of the body gradually enlarge, and the person is not so active as heretofore; is exhausted or out of breath on less exertion than previously; and the circulation is impeded through the accumulations of oily or fatty matter.

Treatment.—Gradually reduce the quantity of aliment; take less nutritious substances for food; drink sparingly, especially of malt liquors; use regular and daily active exercise, abstain from suppers, take short rest, sleep but few hours, and rise early every morning. By a rigid pursuance of these means, for a due length of time, the most corpulent and unwieldy man or woman will be reduced within moderate bounds, with an acquisition of health, strength, and vigor. In addition to active exercise, the body should be rubbed with a pomatum made of lard

three and a quarter ounces, and camphor one ounce. This to be heated and mixed over the fire, and afterwards suffered to cool. Afterwards take five grains of aloes every four days, and employ the following clyster every morning: Linseed, 1 ounce; rose leaves, 1½ drams; bay salt, 3 drams. Boil the ingredients for twenty minutes in a quart of water. Just before taking the decoction off the fire, add to it camphorated oil one and a half drams.

Cough.—Cough is a convulsive effort of the lungs to get relief of phlegm or other matter. It may be a symptom of bronchitis, or catarrh, or croup, or influenza, or laryngitis, or phthisis, or pleurisy, or pneumonia, or relaxed uvula, or of hooping-cough.

We can here lay down but a few general principles with regard to the treatment of simple cough, without reference to the peculiar disease of which it may be symptomatic; and first let us observe, that it may be either what is properly, as well as medically, termed dry or moist. In the former case, opium and its preparations are advisable; in the latter they should not be used. The irritation will be best allayed by henbane or hemlock, either the tincture or extract, with demulcents, as barley-water, flaxseed-tea, etc., and liquorice, either the root boiled or extract. It is well also to add from five to ten drops of ipecacuanha wine to each dose. Inhalation also of the steam from boiling water will generally be found beneficial; and especially if some medicinal herb, such as horehound or coltsfoot be infused in it. In moist coughs, there should not be so much fluid taken, and the use of demulcents must be somewhat restricted. Opiates may be administered, but not too freely, either separately or in cough mixtures. Paregoric elixir, in which the opium is combined with benzoic acid and oil of aniseed (expectorants), and camphor (anti-spasmodic), is perhaps the best form of administration. A teaspoonful in a glass of water generally allays the irritation, and the frequent desire to cough which arises from it. In cases where there is difficulty of expectoration, this mixture should be taken: Compound tincture of camphor, 4 drams; ipecacuanha wine, 2 drams; oxymel of squills, 2 drams; mucilage of acacia, 1 ounce; water, 4 ounces. Mix, and take a tablespoonful when the cough is troublesome. For old people, 2 drams of tincture of benzoin, commonly called friar's balsam, may be added to the above; and if there should be much fever, two drams of sweet spirits of nitre. For all kinds of cough, counter-irritants should be applied, such as blisters and warm plasters, rubbing in of stimulant ointments on the

chest and between the shoulders; those parts also should be well protected by flannels next the skin. For coughs which are more particularly troublesome by night it is best to give the opium, henbane, or hemlock, as the case may be, at bedtime, in the shape of a pill; of the extracts of either of the latter five grains may be given; of the first, one or two grains of the gum, or one-quarter of a grain of morphine. A long experience of their efficacy among a large number of dispensary patients enables the author to recommend with confidence the following pills: Compound squill pill, 1 dram; ipecacuanha powder, ½ dram; extract of hyoscyamus, ½ dram. Mix, and make into twenty-four pills, and take one or two on going to rest.

Coughs should never be neglected, they are so frequently symptomatic of organic disease. If they do not yield to simple remedies, let medical advice be sought, whether the patient be old or young.

Cramp.—Cramp is an affection usually caused by exposure to cold or damp.

Treatment.—Foment the part affected with warm water, with a little mustard mixed in it. Drink nothing cold, and take a little brandy and water; put the feet in warm water, and endeavor to produce a perspiration. Take, two or three times a day, a dose of Peruvian bark in a little wine, or a little ginger and water. Or the following: Water of ammonia, or spirits of hartshorn, 1 ounce; olive oil, 2 ounces. Shake them together till they unite, and rub it on the affected part with the hand. In severe cases use the following: Strong liniment of ammonia, 1½ ounces; oil of turpentine, 1 ounce; spirits of camphor, 1 ounce; hard soap, 4 drachms. Mix the whole well together, and apply it to the part on flannels heated and moistened. When the cause of cramp is constitutional, the best preventives are warm tonics, such as the essence of ginger and camomile, Jamaica ginger in powder, etc., avoiding fermented liquor and green vegetables, particularly for supper, and wearing flannel next the skin.

Cramp, or Spasm in the Stomach.—A violent pain, but generally of short duration

Treatment.—Give a strong purgative injection. The sweet tincture of rhubarb and soda, four ounces of the first to two drams of the last, with a few drops of cayenne-tincture mixed with it, will often give relief. Dose, from a teaspoonful to a tablespoonful. A mustard poultice on the stomach is very good. Drink copious draughts of hot water, brandy and water, ether,

or laudanum; apply hot flannels moistened with compound camphor liniment and turpentine; bathe the feet in warm water, or apply mustard poultices to them.

Deafness (*Surditas*).—Deafness may proceed from any injury inflicted on the delicate organs of the ear by loud noises, violent colds, inflammation or ulceration of the membrane of the auditory passages; hard wax, or other substances interrupting the transmission of sounds; either over dryness, or excessive moisture in the parts, want of tone in the general system from debility. Among one of its frequent causes, is some defect in the structure of the organ itself, which no medical treatment can obviate; in this case there is generally dumbness as well.

Treatment.—The treatment depends to a considerable extent on the cause. If there is an accumulation of hardened wax, or any defective or diseased action in the secreting glands of that substance, a few drops of a saturated solution of common salt, or of ox-gall and balsam of tolu, one part of the former to three of the latter, may be dropped into the ear, while the head is held on one side, night and morning; or applied on a piece of wadding inserted by means of a probe. Before each application, the ear should be syringed out with warm milk and water, or soap and water. If there is a thin acrid discharge accompanying the deafness, syringe the ear with warm water or a decoction of poppies. When deafness proceeds from cold in the head, diaphoretics, the warm foot-bath, and flannel wrappers, must be the remedies; if from debility and consequent loss of tone, drop stimulants into the ear, electrify or galvanize, and give tonics; this will be the treatment, also, if it proceeds from defective energy of the optic nerve.

Debility.—General debility is a falling off from the usual power of the individual to perform those exertions in which he has been habitually engaged.

Treatment.—Nourishing food, change of air, careful regulation of diet, cold shower-bath, and the following forms of medicine: Sulphate of magnesia, four ounces; sulphate of iron, eight grains; sulphate of quinine, ten grains; diluted sulphuric acid, one dram; infusion of gentian-root, eight ounces. Dose, two tablespoonfuls twice or thrice a day. Or the following: Compound tincture of bark, one ounce; carbonate of ammonia, two scruples; water, eight ounces. Dose, two tablespoonfuls three times a day.

Defective Appetite.—The loss of appetite may arise from a variety of causes, as the excessive use of wines and

spirits, the partaking immoderately of warm fluids, sedentary occupation, over-anxiety, excess of mental labor, impure air, etc.

Treatment.—Regulation of diet and change of air will be frequently found more beneficial than medicine. But to restore the tone of the stomach, which is the chief aim, the following decoction may be taken: Peruvian bark, six drams; cascarilla bark, two drams. Bruise them in a mortar, and boil them in a pint and a half of water for a few minutes; strain off the liquor while hot, then add tincture of bark, two ounces; diluted nitric acid, one and a half drams. Dose, four tablespoonfuls to be taken thrice daily. Bitter tonics are also advantageous. Rhubarb chewed an hour before dinner-time is also advantageous. One or two four-grain compound aloe pills may be taken at noon with beneficial effect.

Delirium Tremens—Delirium ebriositatis, or mania-a-potu, is a disease of the brain, usually caused by an abuse of spirituous liquors, but sometimes also by great mental anxiety and loss of sleep; or it may result from bodily injuries or accidents, loss of blood, etc. Delirium sometimes makes its appearance in consequence of a single debauch; but more frequently it is the result of protracted or long-continued intemperance. It usually supervenes on a fit of intoxication; but it not unfrequently occurs, also, when the habitual drunkard omits his accustomed draught.

Symptoms.—The approach of an attack is almost invariably preceded by the patient being remarkably irritable, with fretfulness of mind and mobility of body. He becomes very nervous and uneasy; is startled by any sudden noise, the opening of a door or the entrance of a visitor; is restless; the hands and tongue are tremulous; he complains of inability to sleep, and if he dozes for a moment, he is awakened by frightful dreams. Soon delirium manifests itself; if questioned, the patient often answers rightly enough; but if left to himself, he begins to talk or mutter; he is surrounded by frightful or loathsome animals; is pursued by some one who has a design upon his life; has terrible and ghastly visions. Though most commonly of a frightful or terrifying character, the delirium is not always so: occasionally the appearances are droll and ludicrous, and the patient seems amused by them; at other times it turns on some matter of business, as settling of accounts or telling of money, and the patient is in a perpetual bustle, and his hands are constantly full of business. The predominant emotion with a delirious patient is fear, and in his efforts to escape from an imaginary enemy he may be guilty of a murderous assault, or, as is

more frequently the case, may take his own life; and hence he requires to be very carefully watched. The delirium continues until the patient sinks into a sleep, from which he awakes comparatively rational, or dies from exhaustion. In such cases death is often sudden, the patient rising for some trivial purpose, and falling in a faint, from which he never recovers; or at length, after passing many nights without sleep, he sinks into a state of coma, which terminates in death. This disease, however, is rarely fatal, unless where the strength of the patient has been seriously impaired by long-continued excesses.

Treatment.—The great remedy is sleep, and the best means of inducing this is by opium, which is to be given in large doses, and frequently repeated, until the desired effect follows. Sometimes it is necessary, in order to procure sleep, if the patient is in a very exhausted state, or if the disease has been brought on by the cessation of an accustomed stimulus, to allow the patient a certain quantity of his ordinary beverage; but this should not be continued longer than he can do without it. Chloroform has also been recommended as a means of procuring sleep when opium fails; or better probably than either will be found to be the hydrate of chloral, in doses of twenty to forty grains. Some medical men recommend large doses of digitalis, but the nature of this remedy renders it unadvisable in the hands of any but a medical man.

If these efforts are successful and the nervous excitement is subdued, there will be great prostration of strength. The great object will then be to restore the tone of the stomach, and to enable the patient to overcome that craving for alcoholic stimulants which is sure to send him back into the paths of intemperance if it is indulged. A bitter infusion of camomile is perhaps the best, but carbonate of soda, or potash, in six or eight grain doses, should be given with a small portion of alcohol; it may be brandy mixed with the yolk of an egg, beaten up raw, or with arrowroot, some bitter ale, and good nourishing food. A cold shower-bath affords great relief.

This disease is to be carefully distinguished from inflammation of the brain, with which it has many symptoms in common; for bleeding, which is resorted to in the latter disease, would be of the utmost danger in this.

Diabetes.—An immoderate flow of urine, distinguished as first *insipidus* (tasteless), when the urine retains its usual taste; and second, *melitus* (honied), when it is characterized by a saccharine taste. Generally speaking, these may be considered as two stages of the disease, the urine being at first clear and with-

out other than the usual taste, and afterward becoming cloudy and sweet.

Causes.—The chief causes of diabetes are intemperate living, excess of venery, copious evacuations of the bowels, long-continued, frequent use of diuretics and acrid drinks, or it may be hard labor and poor living, or aught which tends to impoverish the blood. The best physicians consider it "an impaired action, or morbid change, in the natural powers of assimilation and digestion, which forms the proximate cause of the disease."

Symptoms.—Frequent and copious discharge of urine, containing eventually, if not at first, a large proportion of saccharine and other matter. There is gradual emaciation, voracious appetite, great thirst, weakness, and disinclination to motion; the alimentary process is improperly performed, and thus the food taken does not yield its proper amount of nourishment, and constitutional derangement is the consequence.

Treatment.—The diet should be entirely animal food—all vegetable substances to be avoided—the bowels to be kept quietly open with pills of aloes and soap, emetics and diaphoretics occasionally administered, perhaps the compound ipecacuanha powder, ten grains at bed-time, is the best; alkaline drinks, such as soda water, may be given with advantage, and blisters and issues applied to the regions of the kidneys, covering the skin with flannel, anointing it with camphorated oil; using the warm bath and the flesh brush are also good, as are chalybeate and sulphurated waters. Tonics, astringents, and stimulants will be of service, especially preparations of iron with tincture of cantharides; if in the summer, sea-bathing, and anything which may serve to invigorate the system. Such is an outline of general treatment; of course, constitutional peculiarities require special and appropriate remedial measures, and of these only the professional adviser can judge.

Diarrhœa—Causes.—The causes which produce diarrhœa are bad and indigestible food, or food taken in too great quantities; acid fruits, or oily and putrid substances taken into the stomach; the abuse of active purgative medicines, the application of cold to the body, the suppression of perspiration, long-continued heat of the atmosphere, a transfer of gout or rheumatism to the intestines, and depressing passions of the mind.

Symptoms.—This disease consists in a copious and frequent discharge of feculent matter from the bowels, accompanied by griping. There is a sense of weight and fullness in the lower part of the stomach, attended with a murmuring noise, arising

from the presence of a great collection of wind. This feeling is relieved after every evacuation which takes place, and is again renewed before a second ensues. In addition to these symptoms, the patient is troubled with nausea, sickness, vomiting, and, if the purging be not quickly arrested, by great exhaustion and depression of the vital powers, accompanied by spasm and cramp. It is distinguished from dysentery by the absence of fever, inflammation, contagion, and straining at stool, and also by the absence of blood in the motions. The appearance of the motions in the commencement of the disease is sometimes thinner than natural, in consequence of a large quantity of fluid being poured out by the intestines. They are sometimes slimy and of a green color; sometimes they are yellow, and sometimes of a dark brown, accompanied by a very fetid smell. As the disease advances the motions become very watery, and similar to coffee grounds; the strength rapidly fails, the countenance turns pale, the skin is dry and stiff, great emaciation takes place, and dropsy frequently ensues.

Treatment.—In the treatment of this disease, attention must be paid to the cause which produces it, and the remedies administered accordingly. If it arises from repletion of the stomach, or from indigestible food, a gentle emetic of ipecacuanha should be given (say twenty grains). This should be followed by an aperient, to clear out any offensive matter that may remain in the intestines. The following will be a good draught: Powdered rhubarb, 1 scruple; cinnamon water, 1½ ounces; compound spirit of lavender, 2 drams. Make a draught to be given at bed-time.

Should the motions be scanty and frequent, and accompanied by some degree of bearing down, four or six drams of castor oil, with five drops of tincture of opium, will afford great relief. This treatment will also suit in cases where oily and putrid substances have been taken into the stomach. If it arise from the abuse of purgative medicines, they must be discontinued, and the following mixture administered: Tincture of rhubarb, 1 ounce; tincture of opium, 30 drops; spirit of lavender, 4 drams; cinnamon water, 5 ounces. Make a mixture, and take two tablespoonfuls every four or six hours.

If it has proceeded from the application of cold to the surface of the body, or the suppression of perspiration, every effort must be made to restore the secretion by the administration of medicines which determine to the skin, such as James' or Dover's powder—five grains of the former, or ten of the latter, will be sufficient for a dose, which may be taken in a little gruel

or arrowroot. The patient should immerse his feet in warm water every night; and should the looseness continue, he may take the following powder three times a day: Dover's powder 3 grains; mercury with chalk, or grey powder, 2 grains. Mix. When it arises from acidity in the stomach, which is known by frequent eructations of air, diffusing a hot and disagreeable sensation in the mouth, griping pains in the belly, accompanied by motions of a clay color, which produce a burning sensation at the rectum in passing through, absorbents with opium must be employed. The following is a good mixture: Prepared chalk, 3 drams; spirit of lavender, 2 drams; compound tincture of cardamoms, 2 drams; tincture of opium, ½ dram; cinnamon water, 6 ounces. Make a mixture, and take two tablespoonfuls every three or four hours until the relaxation ceases.

Should it arise from a transfer of the gout or rheumatism, fomentations of hot water, mustard plasters, or blisters, should be applied over the bowels; the patient's feet should be immersed in hot water, and ten grains of Dover's powder administered to produce perspiration. At the same time he should drink plentifully of weak brandy and water, or wine whey.

Should it arise from the presence of worms, which is recognized by the slimy motions, and the presence of the worms themselves, either in a living or dead state, the remedies recommended among the prescriptions for their expulsion should be had recourse to.

When it arises from ulceration of the intestines, as often happens in consumption and other protracted diseases, the most effectual astringents, in addition to what has been already recommended, should be employed, such as catechu, kino, alum, logwood, tannin, white and blue vitriol. The following is a good mixture in these cases: Chalk mixture, 5 ounces; tincture of catechu, 4 drams; tincture of kino, 3 drams; syrup of poppies, 2 drams; tincture of opium, 30 drops. Make a mixture, and take two tablespoonfuls three or four times a day.

The diet in these cases should consist of sago, arrowroot, and rice-puddings, made with or without milk, or they may be given in a liquid form; all solid food should for a time be suspended. It will be necessary for those persons who are subject to frequent attacks of this complaint, either from a peculiar weakness or irritability of the bowels, to live temperately, to avoid all acid fruits, most kinds of vegetables, unwholesome food, and meats hard of digestion.

Eclectic or Herbal Treatment for Diarrhœa.—If caused by cold or obstructed perspiration, keep the patient warm; drink

freely of weak diluting drinks; use the tepid bath, and wear flannel next the skin. A little snake-root tea will also be found useful. If there is much griping, a hot fomentation of garden mint should be applied to the stomach. Speedy relief has been effected by taking twelve drops of laudanum in half a gill of the best brandy. Repeat, if necessary, in about an hour. When diarrhœa is caused by excessive repletion, give an emetic composed of half a dram of ipecacuanha; work it off with warm water or thin gruel. If, after a day or two, the looseness continues, give half a dram of rhubarb once or twice a day.

In obstinate cases, the jelly of slippery elm and blackberry, in equal parts, mixed with a little powdered ginger or cinnamon, may be used. For chronic looseness, the following decoction is very good: Bistort root, bruised, three ounces; water, one quart. Boil twenty minutes; then add cloves, bruised, one ounce; cranesbill and wild mint, of each half an ounce; catechu, two drams. Boil ten minutes longer, strain, add loaf sugar, one pound. Dose, three tablespoonfuls three or four times a day.

The following has also been used with excellent results: Take equal parts of tincture of rhubarb, spirits of camphor, essence of peppermint, and laudanum. Dose for an adult, one teaspoonful every hour, if necessary; less according to age of the patient and severity of the disease.

Dilation of the Heart.—Dilation of the heart is sometimes caused by excessive exertion and strong excitements of any kind. The whole substance of the organ, or one or more of the cavities, or smaller orifices, may be dilated, the walls being merely extended, with t any increase of substance. In this case the muscular parietes being thinned and feeble, there will be want of vigor in the circulation, the muscular compression and extension will be weak and irregular, and the valvular action incomplete, so that the blood will frequently escape out of its proper channels, and these hemorrhages, although trifling in themselves, will so reduce the patient that he will probably be carried off by one of them. Abstinence from the exciting causes of the disease, rest, and nourishing diet, with strict attention to the general state of the health, are the means to be taken in this case.

Diphtheria.—Diphtheria is a very malignant and fatal disease of the throat, which was first specially observed and described by M. Bretonneau, of Tours, in France, where it prevailed as an epidemic in 1818, though it doubtless has existed in the world from the earliest times.

Symptoms.—It is characterized by a peculiar inflammation of the mucous membrane of the throat, or pharynx, accompanied by the production of a false membrane. At first this membrane appears in the form of a white spot on the pharynx or tonsils, from which it gradually extends forward to the soft palate and into the nostrils, and backward into the œsophagus, sometimes into the larynx, but seldom into the trachea, producing at length suffocation. It is usually accompanied by a fetid discharge from the nose and mouth, and hemorrhage frequently occurs. There is usually, also, a low and dangerous form of fever, with great depression of spirits, and rapid decrease of the patient's strength, which is still further accelerated by his inability to take food. There is no form of the disease, however mild to appearance, that is not attended with danger, and it is sometimes fatal in thirty-six hours, but more frequently in from three to twelve days.

Treatment.—Medical men are by no means agreed as to the mode of treatment to be followed. It is generally agreed, however, that everything is to be done to support the strength of the patient, by stimulants, nutrients, and restoratives. On its first appearance, wine or brandy, in frequent doses, according to the strength of the patient, should be given, with beef-tea, eggs, etc. Quinine or iron is also recommended. Poultices or warm fomentations applied externally, and the inhalation of the vapor of hot water and vinegar, will afford some relief. The patient should be confined to bed, and the temperature should be about 68° Fahr., and kept constantly moist with steam from a boiling kettle. Opiates are frequently necessary to be given in order to procure sleep, and ice kept dissolving in the mouth is often a great comfort. Afterward good nourishing food, change of air, and tonics are necessary to complete recovery. There can be little doubt that this disease is owing, in some measure, to the neglect of sanitary measures; and it is generally believed to be both epidemic and contagious, though some medical men deny these statements.

Discolored Skin.—As caused by moles, freckles, and sunburn, is the result of diseased action.

Freckles are brown spots on the face and hands, caused by exposure to the sun. Persons affected with these unsightly discolorations may remove them without using cosmetics (which are often dangerous by reason of their containing mineral agents), by merely stimulating the absorbent vessels of the skin to take them up and carry them away as refuse. Any smart stimulant will act in this way; but it has been found that the

safest are taken from the vegetable kingdom. One of the best and easiest is Withering's Cosmetic Lotion, which is made of a teacupful of soured milk, and a small quantity of scraped horse-radish; let this stand from six to twelve hours, then use it to wash the parts affected twice or thrice a day.

Moles in the skin, or, as they are commonly called, mother-marks, are beyond the reach of surgical treatment; or, if they ever can be removed, it is only at the risk of causing a greater disfigurement; therefore they had better be left alone, the more especially as they not unfrequently answer a useful end—that of positive identification.

Dizziness.—Many persons are subject to a fullness and rush of blood to the head, either with or without any excitement. It is a symptom of a deranged system, and it may be a symptom of a tendency to apoplexy.

Causes.—This condition may be caused by heart disease, by debility arising from hemorrhages, indigestion, constipation, or excessive mental labor.

Treatment.—What has been said on congestion of the brain applies to this affection; a dose of some gentle purgative should be taken, as castor oil, salts, or salts and senna, should be taken at night, and the following in the morning: Rochelle salts, 2 drams; bicarbonate of soda, 2 scruples; water, ½ pint. Mix. To this mixture add 35 grains of tartaric acid. Take the whole while foaming.

Disorders of the Sweat Glands.—The proper action of the skin is of the greatest importance to the health. Too much or too little perspiration may produce serious consequences; but can generally be corrected by cold or warm baths, tonics, friction, and proper clothing.

Disorders of the Oil Glands.—When the skin is not well taken care of, or when a person has very sedentary habits, the action of the oil glands becomes sluggish; the matter in the tubes become hard and dry and distends them, sometimes raising them above the surface, and the ends become black. Again, the oily matter is poured out too profusely, so that the skin shines with it; or, at times, there may be so little that the skin is harsh and dry.

Treatment.—For roughness and harshness of the skin, wash with soap and water every night, and rub well into the skin after the bath; and in the morning, an ointment made of olive oil, 4 ounces; white wax, 2 drams. Melt together, and then add

honey, 2 drams; croton oil, 20 drops. Take a dose of sulphur and cream tartar twice a week.

Where the oil tubes have hardened, and formed a horny growth, the body should be washed with a quart of water, in which a teaspoonful of saleratus is dissolved; and twice a day use the following ointment: Elder-flower ointment, 1 ounce; blue vitriol, 1 scruple. For grubs in the skin, stimulate it by washing in strong soapsuds twice a day, and rubbing briskly with a coarse towel, and by using this lotion: Corrosive sublimate, 5 grains; cologne, 2 ounces; soft water, 6 ounces. Mix and apply. A spare diet will do much in some cases toward improving the skin.

Dropsy of the Heart (*Hydrothorax*).—This is a collection of fluid in the cavity of the chest, or the pericardium. It is never an idiopathic disease, but is consequent on some previous disorder of the viscera of the chest, it may be of the heart or lungs, or their investing membrane, the pericardium or pleura.

Symptoms.—Great difficulty of breathing, especially after exertion, and when the body is in a horizontal position, with great weight and oppression at the chest; pallid, purpleish countenance, with an anxious expression, and the usual symptoms of dropsy. It requires the same treatment as dropsy.

Disease of the Valves of the Heart.—Disease of the valves so commonly follows endocarditis, if of long continuance, that it may almost be considered as a chronic form of that disease. It is a thickening of the internal lining of the heart, especially at the valves. It becomes not merely thickened uniformly, but is the seat of warty excrescences, and even cartilaginous and osseous formations of considerable size, extending into the cavities of the heart. In old persons and especially those addicted to a generous mode of living, we most frequently meet with ossification, the effects of which are sanguineous and serous congestion, difficulty of breathing, apoplectic seizures, and other symptoms of embarrassed circulation.

Dropsy.—Dropsy consists of an unnatural accumulation of serous or watery fluid, in various parts of the body. Persons of all ages are liable to it. It is divided into five kinds, according to the part affected: first, dropsy of the skin, generally called *anasarca;* second, dropsy of the belly, called *ascites;* third, dropsy of the chest, called *hydrothorax;* fourth, dropsy of the head, or water in the brain, called *hydrocephalus;* fifth, scrotal bag, called *hydrocele.*

Causes.—Excessive and long-continued evacuations, weak-

ening the system; a free use of fermented or spirituous liquors; confirmed and incurable indigestion; diseases of the liver, spleen, pancreas, mesentery or others of the viscera; preceding diseases, as asthma, scarlet fever, etc.; anything debilitating the digestive organs; sometimes from family predisposition.

Symptoms.—This disease generally commences with swelling of the feet and ankles toward night, which for a time disappears in the morning. The swelling, when pressed, will pit; it gradually ascends till the whole body is swelled, in the first sort, and the belly in the second sort; the urine scanty, thick, and high-colored; thirst is great, breathing difficult, especially in the third sort, and a troublesome cough; the flesh wastes, and the patient weakens; in the fourth sort, pains on the top of the head, and often convulsion or apoplexy; in the fifth sort, the scrotal bag is much enlarged, and much pain in consequence.

Treatment.—The diet must be of a dry, heating nature, using pungent vegetables, as garlic, mustard, onions, cresses, horseradish, shalots, etc., and the flesh of wild animals. Avoid drinks as much as possible; quench the thirst with acid liquors, mustard whey, and the like; and take some of the following: Cream of tartar, 1 dram; sulphate of potass, 10 grains; rhubarb in powder, 5 grains. Take in pumpkin-seed tea two or three times a day. Or use the following: Powder of dried squill-root, 2 grains; blue pill, 5 grains; opium, $\frac{1}{2}$ grain. Dose, one pill at bedtime for four or five nights, followed by the above powder the morning after.

In dropsy of the chest or head, blisters are almost indispensable, and are always applied to great advantage; and, if kept running for some time, are very beneficial. After the water is removed, live well and temperately. Take tonics and strengthening food.

Eclectic or Herbal Treatment for Dropsy.—Many cures have been effected by using a decoction of burdock. Boil two ounces of the fresh root in three pints of water till reduced to two. Drink the whole in the course of two days.

A teaspoonful of saltpetre taken every morning is said to have cured many.

From one to four teaspoonfuls of the expressed juice of the inner bark of the elder, taken every four hours, till it operates freely, is of great service.

To promote perspiration an adult may take every night at bedtime four or five grains of camphor, one grain of opium, and as much syrup of orange-peel as is sufficient to make into a bolus.

Dysentery—A disease accompanied by frequent and scanty motions, and great bearing down of the rectum. Stools, mucous or bloody, slimy, and containing little or no fecal matter.

Causes.—The causes which produce this disease are—a cold and moist state of the atmosphere, quickly succeeded by heat; the suppression of the perspiration, whereby the blood is thrown from the external upon the internal vessels; immoderate use of spirituous liquors, unwholesome food, exposure to noxious exhalations, or to the effluvia arising from the bodies of persons laboring under the disease.

It is supposed that dysentery, when it proves infectious, is owing to the impure and vitiated condition of the atmosphere; hence it frequently appears in hospitals which are not properly ventilated, and other places where a number of sick persons are crowded together; while in situations where great attention is paid to ventilation and cleanliness, it seldom extends beyond the individual in whom it originates. It prevails epidemically, affecting numbers in a community, without being contagious.

Symptoms.—This disease is ushered in by all the concomitants of inflammatory fever—such as cold shivering succeeded by heat of skin, frequency of pulse, loss of appetite, sickness, and costiveness. This stage is quickly followed by severe griping pains, and pain on pressing the belly, frequent desire to go to stool, accompanied by great straining and painful bearing down of the rectum—the evacuations consisting of a peculiarly fetid matter, without containing any particle of healthy motion. These evacuations frequently vary in their appearance, being sometimes pure mucus, or mucus streaked with blood; sometimes pure blood is passed, at other times pure matter, and it not unfrequently happens that pieces of membrane, arising from ulceration of the lining of the intestines, are seen floating in the dejections. It is seldom that any natural feces appear in the course of this disease, but when they do, they are passed in hard, small balls, accompanied by great relief of the griping and bearing down.

Favorable Symptoms.—A gentle perspiration over the surface of the body, the stools improving in color, and becoming less frequent; a sediment in the urine, and the strength little impaired.

Unfavorable Symptoms.—The tenesmus, or bearing down of the gut becoming very intense, the inclination to go to stool more frequent, the discharge from the bowels being very scanty and of an unnatural color; much depression of the powers of

life, a tense state of the belly, cold, clammy perspirations, ulceration of the mouth and throat, a feeble pulse, and coldness of the surface of the body.

Treatment.—If the fever be of an inflammatory character, accompanied with rigors and succeeded by heats and flushes, an emetic should be administered at once (say twenty grains of ipecacuanha and one of tartar emetic). This should be followed by a dose of castor oil, or some saline aperient, which should be repeated every second or third morning, so that evacuations of a natural character might be procured. The following is a good mixture for this purpose: Epsom salts, 1 ounce; best manna, ½ ounce; peppermint water, 5 ounces; tincture of rhubarb, 2 drams. Mix. Four tablespoonfuls to be taken every second or third morning.

Should there be much pain on pressing the belly, leeches, in numbers according to the age and strength of the patient, should be applied, which should be followed by fomentations of the decoction of poppy-heads and camomile flowers. The puratives already recommended should be continued every second morning, and in the interval small doses of Dover's powder and calomel should be given every four or six hours. With the object of relieving pain and producing perspiration, five grains of Dover's powder and one of calomel will form a sufficient dose, which should be continued until the pain and irritation be tranquilized, or the mouth becomes tender. These remedies should be followed by mustard plasters, or blisters, to the stomach, which have the power of relieving pain and stopping the violent sickness which frequently takes place in this disease. Relief will also be found from the application of soothing liniments over the abdomen, as the following: Camphorated oil, 1 ounce; tincture of opium, ½ ounce. The belly to be rubbed with this oil several times a day. Camphorated oil is made by dissolving half an ounce of camphor in two ounces of sweet oil.

In order to relieve the tenesmus or bearing down, injections consisting of starch, or mutton broth, and tincture of opium, say half a dram, or even a dram, should be thrown into the rectum; or, should these not be retained, or fail to afford relief, two grains of opium, made soft with a little oil or conserve of roses, introduced into the rectum, will be found very serviceable. In employing the injection, a small quantity of fluid should be used, say not more than two ounces, as more in quantity will not be retained; and in introducing the opium, care should be taken to put it beyond the sphincter muscle, at

least two inches from the verge of the anus. The bowels should be kept open with castor oil combined with small doses of laudanum, say half an ounce of the former, and ten drops of the latter. In the advanced stage of this disease great benefit will be derived from the following mixture: Diluted nitric acid, 2 drams; laudanum, 1½ drams; distilled water, 14 drams. Mix. A teaspoonful to be taken four times a day in a cup of barley water.

When there is acidity in the stomach, absorbents combined with opium will be required, such as chalk, kino, catechu, and logwood. The patient should at the same time drink port wine and water with his meals; as a common drink, equal parts of lime water and milk have been highly recommended.

In those cases where the motions are passed frequently, from a weakened state of the bowels, the greatest benefit will be derived from the sulphate of zinc, alum, sugar of lead, and blue vitriol, in combination with opium. In a more advanced state of the disease, vegetable tonics should be administered for the purpose of giving tone to the muscular coat of the intestines, and of improving the health generally. The following is an excellent mixture for this purpose: Infusion of cascarilla, 5 ounces; tincture of colombo, 1 ounce; tincture of catechu, 2 drams; diluted nitric acid, 1 dram. Mix. Three tablespoonfuls three times a day.

In those cases where there is a tenderness over the region of the liver, and a dusky, sallow appearance of the countenance, and the motions are of a clayey color, a grain of calomel, with one quarter of a grain of opium, may be given twice or three times a day, with great advantage, which should be continued until all bad symptoms give way, or until the mouth becomes tender.

The patient should live, at the commencement of the disease, on preparations of barley, rice, sago, flour, tapioca, and Indian arrowroot boiled in milk, and broths occasionally should be allowed. The juice of meat is preferable to broths or soups, which often sour on the stomach; this may be obtained by chewing the meat, and rejecting all except the juice. He should avoid all spirituous and fermented liquors, and food of all descriptions which have a tendency to putrefaction. During his convalescence or recovery, meat of the lighter kinds, such as mutton, chicken, or beef, may be used, and he should drink port wine and water, or brandy and water at his meals.

As dysentery is considered by most physicians to be contagious, the greatest care should be taken to secure a good ven-

tilation, particularly where persons are crowded together, as on board ship or in hospitals. The sick should be immediately removed from the healthy; they should be placed in separate rooms, if possible; their motions should be taken away as soon as passed, the body linen and sheets frequently changed, and the rooms fumigated with the solution of chloride of lime or boiling vinegar. The following is a cheap and easy method of fumigating, for the purpose of destroying contagion arising from dysentery, small-pox, typhus fever, or any other infectious disease: Peroxide of manganese, 2 parts; common salt, 4 parts; oil of vitriol, 3 parts; water, 1 part. This mixture should be placed in an earthenware vessel, and allowed to remain in the room until all vapors cease to rise. A greater quantity of this vapor, which is chlorine gas, may be obtained by putting the same mixture in an oil-flask and applying heat. Of course this method of fumigating cannot be resorted to until the patients are removed from the rooms or places about to be fumigated, as the vapor cannot be breathed without producing great irritation of the lungs; and when existing in any great quantity in the atmosphere is fatal to life.

Eclectic, or Herbal Treatment for Dysentery.—An emetic composed of half a dram of ipecac in powder, must be given; work off with weak camomile tea. After which take one ounce of Epsom salts, half an ounce of manna, and two and a half ounces of warm water, and the same of peppermint water. Dose: four tablespoonfuls three or four times a day. The following has been found very beneficial: Take one tablespoonful of common salt and mix it with two tablespoonfuls of vinegar, and pour upon it a half pint of water, either hot or cold, only let it be taken cold. A wineglassful of this mixture in the above proportions, taken every half hour, will be found quite efficacious in curing dysentery. If the stomach be nauseated, a wineglassful taken every hour will suffice. For a child, the quantity should be a teaspoonful of salt and one of vinegar in a teacupful of water.

Blackberries are extremely useful in cases of dysentery; to eat the berries is very healthy. Tea made of the roots and leaves is very beneficial; and a syrup made of the berries is still better. The following is also very useful: Bistort root, tormentil root, ginger root, each (sliced and bruised) one ounce; green peppermint and wood sage, of each one ounce; Turkey rhubarb and gum myrrh, of each half an ounce; cinnamon, two drams; water, two quarts. Boil down to three pints; strain. Pour the boiling liquor on to loaf sugar, half a pound; bicar-

bonate of potash, half an ounce. Then add tincture of myrrh, one ounce; spirit of camphor, two drams; oil of peppermint, twenty drops (put those together before adding to the liquor). Dose: a wineglassful every fifteen minutes until relief is got.

Dyspepsia (*Indigestion.*).—This is one of the most common ailments to which mankind is subject, there being few individuals who have not experienced it oftener than once in their lives.

Causes.—Accidental fits of indigestion are of frequent occurrence, and arise for the most part from overloading the stomach with food, and indulging freely in wines, spirits, or other intoxicating liquors. Confirmed or chronic indigestion may depend on debility or want of tone of the stomach, or it may be caused by the lining or mucous membrane of this organ being in a state of irritation or chronic inflammation. One of the most frequent causes of indigestion is not masticating the food we eat properly, by which such food is bolted, instead of being reduced to a natural pulp, thereby presenting to the digestive organs a hardened mass, which it has the greatest difficulty to operate upon. Another cause is habitual inattention to diet, both as regards the quality and quantity of food, irregularity in the times of eating, drinking large quantities of warm, relaxing fluids, and using malt liquors too freely. A third cause is insufficient exercise; a fourth cause, impure air; and, beside these, there are numberless other causes, which in a greater or less degree exercise their baneful influence upon this vital and all-important function of our natures.

Symptoms.—One of the most frequent signs of indigestion is a loss of appetite, no desire for food, perhaps even an absolute repugnance and disgust at the very thought of eating. Sometimes the appetite is capricious and uncertain, or may even be morbidly craving and ravenous. Sometimes nausea comes on immediately after the food is swallowed; and sometimes without any nausea, but after the lapse of some time, the food is ejected by vomiting. There is also usually an obscure feeling of uneasiness, fullness, distension, and weight in the region of the stomach, occasionally amounting to pain, or even severe pain, with flatulence and eructation. Some persons suffer pain when the stomach is empty, others immediately after taking food, or the pain may not begin for two or three hours after a meal, and then continue for some hours. Sometimes the pain comes on at uncertain intervals in the more violent paroxysms accompanied by a sensation of distension, much anxiety, and extreme restlessness. Costiveness is a very frequent concomi-

tant of dyspepsia, but sometimes it is attended with diarrhœa. Among the innumerable disorders in more distant parts that are produced by dyspepsia are palpitations of the heart, irregularities of the pulse, asthma, pain in the head, with the loss of mental energy, and some confusion of thought. One of the worst of the occasional concomitants of dyspepsia is that state of mind which is known as hypochondriasis. There is languor, listlessness or want of resolution, with an apprehension of some great evil in the future. Such persons are particularly attentive to the state of their own health, and, from any unusual feeling, perhaps of the slightest kind, they apprehend great danger, or even death itself.

Treatment.—Before we proceed to give the remedies applicable to this disorder, we will lay before our readers what is of equal consequence, both as regards prevention and cure—viz., diet and regimen. Rise early; sponge the body freely with cold water; breakfast without taking previous exercise. At breakfast, drink no more than half a pint of tea, neither too strong nor too weak, and black tea in preference to any other. Eat a slice or two of stale bread, together with a thin rasher of streaky bacon. After a short rest, exercise should then be taken for two hours or upwards. The dinner hour should be not later than four or five hours after breakfast, and the best time in the day for this meal is one or two o'clock. The food should be plain, without sauces. Roast mutton is the best of all meats, both as regards its nourishing properties and the ease with which it can be digested. For drink, water or toast-and-water are preferable. After dinner, rest and quiet for an hour are desirable. About four or five hours after dinner, a cup of tea with a biscuit, or bread and butter, with fresh or preserved fruit. To bed between ten and eleven o'clock. This mode of living will generally render a person exempt from habitual indigestion; nevertheless, in spite of these precautions, occasional attacks of this derangement will make themselves felt, when either of the following may be taken: Bay berries, 6 drams; grains of paradise, 2 drams; socotrine aloes and filings of iron, of each 2 scruples; oil of turpentine, 2 drams; simple syrup, sufficient for an electuary. Take a piece the size of a nutmeg night and morning. Rhubarb, 15 grains; sulphate of potass, 30 grains; tincture of senna, ½ a dram; peppermint water, 1½ ounces. Mix, and take twice a week until relief is afforded. Columba root in powder 8 grains; rhubarb, 10 grains; ginger, 2 grains; ipecacuanha, 3 grains; carbonate of potass, 5 grains; dill water, 1½ ounces. Mix for a draught, take twice a day on an empty stomach. In-

fusion of gentian, 12 drams; epsom salts, 3 drams; tincture of cascarilla, 1 dram; tincture of orange peel, 1 dram. Mix for a draught, which may be taken in the morning on rising, and repeated in six hours. Quicklime, slaked with a little water, ½ ounce; water, 1½ pints; bruised cinchona bark, 1 ounce. Cover and macerate for three hours, occasionally stirring them; decant the clear liquor, and add the following: Tincture of bark, 2 ounces; nitric ether, 3 drams; syrup of orange peel, 1 ounce. Mix, and keep closely corked. Dose, one wineglassful.

Ear-ache (*Otalgia*).—Ear-ache may proceed from abscess in one or more of the passages, or it may be altogether neuralgic. In children it is not uncommon during the period of dentition, and is especially severe in cutting the permanent teeth. Grown persons sometimes suffer from it when producing their wisdom-teeth. It is often brought on by exposure to cold or draughts. There is not often much constitutional derangement, although the pain is sometimes excruciating, unless it is long continued.

Treatment.—In children, during dentition, lancing the swollen gums will often afford relief, especially if an aperient be given, such as rhubarb and magnesia combined with a little ginger. Elder children may have three or four drops of olive or almond oil, with one or two drops of laudanum dropped into the ear, and take compound senna mixture, repeated until the bowels are freely opened. Should these remedies not prove effectual, a fomentation of camomiles and poppies should be applied, and a warm poultice afterwards. The heart of a roasted onion applied warm to the external orifice will sometimes afford relief. If the case is very obstinate, two or three leeches behind the ear, followed by a blister, may be tried, with the following anodyne saline aperient: Acetate of morphine, ½ grain; solution of acetate of ammonia, 3 ounces; sulphate of magnesia, 1 ounce; water of camphor mixture, 5 ounces. Mix, and take two tablespoonfuls every four hours.

When ear-ache is caused by an abscess, and is attended with much swelling and severe pain, hot fomentations and poultices will be the treatment, syringing the external passage with warm water; and after the abscess has discharged, with a solution of sulphate of zinc, in the proportion of eight grains to the ounce of plain, or rose water, attention being paid to the bowels. With some persons any derangement of the general health will cause the formation of these abscesses, and in such cases the treatment must be rather general than local. Ear-ache, no doubt,

often proceeds from derangement of the digestive organs, and may be relieved by active purgatives and emetics.

Where a tonic is required, the following will be found very good: Citrate of iron, 1 dram; strychnine, 1 dram; syrup of orange-peel, 2 ounces; soft water, ½ pint. Mix. Dose, one teaspoonful three times a day.

Enlargement or Swelling of the Uvula.—The pendulous body which hangs down from the middle of the soft palate is subject to several kinds of enlargement, in which it becomes both longer and more bulky than natural, or is simply elongated. Under these diseased conditions, it becomes troublesome in swallowing, as well as in speaking. It causes a disagreeable tickling at the root of the tongue, with an inclination to retch, and an irritating and annoying cough. When things have reached this pass, medicines are often of no avail, and the only resource is to remove a portion of the uvula, which must be done by a surgeon. Before, however, excision is resorted to, and indeed before the uvula increases so much as to render this necessary, astringent gargles and applications should be tried, such as the following: White oak bark, one ounce; water, one pint; boil till reduced one quarter, then add alum, one scruple. Apply to the parts several times a day with a soft sponge.

Enlargement of the Ventricles of the Heart (*Hypertrophy*).—This is the result of an excess of nutrition, the nutritive process appearing to go on more rapidly than the absorbent. In this way the heart is often greatly enlarged in bulk, and its operations seriously interfered with. It is usually distinguished into three kinds: first, simple, when the walls of the heart or its divisions, are thickened, without any diminution in the capacity of the cavities; second, eccentric, or aneurismal, when the walls are thickened, and the cavities likewise enlarged; and third, concentric, when the cavities are diminished in proportion to the thickening of the walls The first of these is the least common, and the second the most frequent; and any of them may affect a single cavity or the whole heart. From the force with which the blood is propelled in such cases being greatly increased, the tendency is to produce hemorrhages, aneurism of the aorta, apoplexy, etc. The pulsations are frequently regular, but strong, sometimes even visibly raising the bed-clothes, and the chest is bulged out over the part.

Treatment.—Rest, abstinence, and more or less depletion, according to circumstances, are the proper means to be employed in such a case; and usually, with care and perseverance, the symptoms will be much alleviated.

Epilepsy.—Epilepsy is a form of disease which receives its name from the suddenness of its attack. It is also called the *falling sickness*, from the patient, if standing, suddenly falling to the ground. By the ancients it was called the sacred disease, from being supposed to be due to the influence of the gods or evil spirits.

Causes.—Among the causes which give rise to epilepsy are external injuries done to the brain by blows, wounds, fractures, and the like; or internal injuries by water in the brain, tumors, concretions, and polypi. Violent affections of the nervous system, sudden frights, strong mental emotions, acute pains in any part, worms in the stomach or intestines, teething, suppression of accustomed evacuations, excesses, masturbation, etc., are causes which also produce epilepsy. Sometimes it is hereditary, at other times it arises from a predisposition, occasioned either by plethora or a state of debility. When it arises from hereditary predisposition, or comes on after the age of puberty or when the attacks are frequent and of long duration, it is usually difficult to effect a cure; but occurring in early life, and occasioned by worms or any other accidental cause, it may, in general, be remedied.

Symptoms.—The attack is usually sudden, without any warning. The patient may be in his ordinary health, engaged, perhaps, in his usual occupation, when all at once he utters a piercing scream, and falls to the ground. Immediately thereafter the face becomes violently distorted, the head is usually drawn to one side, the eyes are set and staring, or roll wildly about, the color of the skin becomes dark and livid, and the veins swollen and turgid; there is frothing at the mouth; the muscles of the lower jaw act violently, producing gnashing of teeth, and frequently the tongue is thereby grievously injured; the arms are sometimes thrown violently about, and the lower limbs may be agitated in a similar manner, while the fingers with great power clutch at whatever comes in their way. The breathing is at first heavy and difficult, but afterwards it becomes short, quick, and stertorous, and is often accompanied with sighing and moaning. One side of the body is commonly more agitated than the other. After a longer or shorter period, the convulsive movements gradually diminish, and the patient seems to recover a faint glimmering of consciousness; but the look which he casts around is stupid and heavy, and he goes off into a lethargic sleep, from which he does not awake for some hours. There is no consciousness of anything that occurred during the paroxysm. On coming out of the fit, there is generally

headache, and always languor, and it may be days before he fully recovers from the effects of the attack. The duration of the paroxysm is usually from five to ten minutes; but sometimes several attacks follow each other in succession, and it may then be protracted for several hours. The most frequent, perhaps, of the consequences of confirmed epilepsy is insanity, either in the form of acute mania or monomania following the attacks, or of gradual imbecility, without any acute seizure. Though the fit, as we have said, usually comes on suddenly, yet there is sometimes distinct warning of its approach. These vary in different individuals, and may be lowness of spirits, irritability, dizziness, noises in the ear, floating specks before the eyes. There is, however, a particular sensation which is said to be felt by some immediately before the attack, and which is known as the *aura epileptica* It is variously described as resembling a current of air, a stream of water, or a slight convulsive tremor, commencing in one of the limbs, and proceeding upwards to the head, when the patient is deprived of all consciousness. Epilepsy is commonly divided into idiopathic, when it is a primary disease, depending on some affection of the cerebro-spinal system; and sympathetic, when produced by an affection in some other part of the body—as the stomach, bowels, liver, circulating system, etc.

Treatment.—During the attack, the principal thing is to see that the patient does not injure himself—especially a piece of cork or other gag ought to be placed between his teeth, to prevent injury to the tongue; the dress should be loosened about the neck and chest; the head, if possible, a little raised; and a free circulation of air maintained. Where the disease can be traced to any special exciting cause—as injuries of the head, worms, teething, etc.—the treatment should be first directed to its removal. Where, as is often the case, a plethoric state appears to occasion the disease, the patient is to be restricted to a low diet, frequent purgatives are to be exhibited, and everything avoided that may determine the blood to the head; and to counteract such a tendency, occasional cupping, blisters, issues, etc., may be useful. If, on the contrary, there are marks of inanition and debility, a generous diet, with tonic medicines and other means of strengthening the system, will be proper. The cold shower-bath is recommended if it can be well borne, otherwise the tepid bath. The oil of turpentine, in frequent doses of a half to one dram, is said to be of service in many cases. Bromide of potassium is a very valuable remedy, given in doses of ten to twenty grains, three times a day. It is worthy of re-

mark that when *aura* has preceded an attack, it has sometimes been prevented by intercepting its progress by means of a ligature. Stimulants, particularly ether, are said occasionally to keep off an attack. In this disease great care is necessary in the matter of diet, and moderation in quantity and simplicity in character are material points. When the appropriate remedies are judiciously employed, and the proper regimen strictly adhered to, epilepsy is often permanently cured, and the suffering is greatly mitigated even in those forms which do not admit of cure.

Eclectic, or Herbal Treatment for Epilepsy.—Observe the same general treatment as before recommended. Give an emetic. The following is a good one: Pulverized lobelia, 1 ounce; pulverized blood-root, ½ ounce; seneca, 1 scruple; ipecac, 6 drams; cayenne, 4 scruples. Mix. Dose, half a teaspoonful in warm water; repeat three or four times, at intervals of fifteen minutes.

Bathe the feet and legs in warm water; apply mustard poultices to the nape of the neck; keep the bowels open; and remove all tight bandages, and give plenty of fresh air. An excellent preparation is the following: Peony, 1 ounce; Peruvian bark, 1 ounce; valerian, 1 ounce; snake-root, ½ ounce. Simmer them together in two quarts of water till reduced to one; add one pound of sugar. Give the patient from one-half to a wineglassful three times a day.

On the approach of a fit, give a teaspoonful of fine salt three times a day; it will shorten the patient's sufferings. A silk handkerchief thrown over the face is said to bring a person immediately out of a fit. A person liable to this affliction should exercise the greatest caution in regulating the passions.

Eruptive Diseases of the Scalp—Are commonly very obstinate and difficult to cure; keeping the hair cut short off, great cleanliness, and regular application of the prescribed remedies, are essential to success in the treatment of such; the head should be washed at least once a day with a strong lather of yellow or Castile soap. The red precipitate ointment is often of essential service in these scalp eruptions, but its application is useless over scabs; they should be removed previously by means of poultices. Alkaline lotions have been used with good effect—about 2 drams of subcarbonate of soda, dissolved in 1½ pints of water, is perhaps the best form; a piece of lint saturated with it should be laid over the head, and covered with oiled silk or thin gutta-percha.

It often happens that an eruption of this kind is thrown

out to relieve the system of morbific matter, and if in this case it is stopped too suddenly, convulsions and other ill consequences may follow; the patient should be put under a course of alterative medicine, and these, with strict attention to cleanliness, etc., will effect a cure as quickly as is safe and desirable.

When there is a full habit, with a tendency to eruptions of the scalp, the diet should be somewhat lowered. Mild and farinaceous food should be in a great measure substituted for flesh. But if the habit be weakly, the diet must be rendered more nourishing and stimulating; in all cases of the kind salted provisions should be avoided.

Erysipelas.—This disease has been popularly known as the Rose, from its red color; and as St. Anthony's Fire, partly from its burning heat, and partly because the saint whose name it bore was supposed to have the power of curing it with a touch. There are several species of this disease; but without going into the particular characteristics of each, it will be sufficient for us to state what are the general symptoms of erysipelatous inflammation, and best remedial measures.

Causes.—Changes of cold and heat, causing peculiar conditions of the atmosphere, may be named among the most common causes of this disease, which frequently appears to originate in the slightest puncture or scratch of the skin, as also from wounds or sores; it is very contagious, and its appearance in an hospital ward is greatly dreaded, as wounds and amputated parts, which up to the time of this visitation have been going on extremely well, frequently assume an inflamed, probably a gangrenous character, which leads to a fatal termination of the case. In a house where a confinement is taking, or is likely to take place, erysipelas should be carefully guarded against, as there is undoubtedly a close connection between that and childbed fever, which is so frequently fatal. On systems debilitated by any disease, whether acute or chronic, this inflammatory affection appears to seize with peculiar avidity, and to spread through the tissues of the skin most rapidly; it is when extending beneath this that it constitutes what professional men call *phlegmon*, meaning, literally, to burn, then it is that purulent matter forms, the parts slough or mortify, and gangrene ensues.

Among the predisposing causes of erysipelas may be also mentioned want of cleanliness, insufficiency or bad quality of the food, and irregularity of living; there may be hereditary and constitutional predisposition, and where this exists the inflammation is very easily excited, strong mental emotion, or a

fit of inebriety, being sometimes sufficient to bring on an attack; it often co-exists with or immediately follows some fevers, in which it may be presumed that purulent matter enters into the venous circulation.

Symptoms.—The symptoms of an attack are usually of a febrile character, such as shivering, headache, furred tongue, accelerated pulse, and often derangement of the stomach for a day or two previously; then there is a tingling and burning sensation, with stiffness and pain, at some particular part, followed by a discoloration of the skin, and a slight elevation of the surface; the red or purplish tint is confined at first to one spot, but soon extends itself, and includes the limb or part affected; frequently this is the head, which, with the face, becomes so swollen and disfigured that the patient cannot be recognized; the eyelids puff out and entirely close the eyes, and each avenue to the senses is for a time closed. In very bad cases delirium and coma come on, and death ensues from effusion on the brain; sometimes the patient dies from suffocation, the glottis being closed, on account of the internal swelling of the throat; and all this may take place in a few hours, so rapid is the progress of the disease. In the milder forms, the patient may be tranquil; until the swelling subsides, there will be a little wandering of the mind probably, more particularly at night, and uneasy restlessness from the pain and inconvenience of the swelling. As the redness extends from the part first affected, that part becomes paler, the swelling there subsides, and sometimes blisters, like those caused by a scald, appear on the surface; if the inflammation is merely superficial, it is neither very troublesome or dangerous; but when it becomes *phlegmonous*—that is, dips down and affects the deeply-seated tissues, there is great cause for alarm; when this is the case the color is generally very florid, the tingling and the burning sensation severe, and the surface hard and firm to the touch. The young and sanguine are most likely to be affected in this way; those of a feebler habit more commonly suffer from the *edematous* form of the disease; in this the parts affected are of a paler red, and softer and inelastic, so that they pit on pressure.

There is a variety of erysipelas called *infantile*, which affects infants at birth: it commences generally at the navel, and extends quickly to the extremities, which are hard, firm, and much swollen, and prone to become gangrenous.

The chief characteristics of erysipelas are its sudden appearance, red color, tendency to spread, febrile symptoms, heat and tenderness of the skin, and blistered surface. We call especial

attention to these, because many affections of the skin are thought to be this, although they bear but a slight resemblance to it.

Treatment.—Having a certain course to run, whose period cannot be shortened, the great object will be to conduct the patient safely through it. First administer a cooling aperient. When the aperient has operated freely, give the following saline mixture: Sweet spirits of nitre, 2 drams; sulphate of potash, 2 drams; liquor of acetate of ammonia, 2 ounces; camphor mixture, 6 ounces. Take two tablespoonfuls every four hours; or, if the stomach be irritable, give this effervescing mixture: Bicarbonate of potash or of soda, 2 drachms; water, 6 ounces; syrup of orange peel, 2 drams. Pour out two tablespoonfuls in a wine-glass, and add 15 grains of citric or tartaric acid—the former is best of the two; but better still is a tablespoonful of fresh lemon juice; stir and drink while effervescing. The patient during this treatment must be kept on low diet, taking nothing but mild diluent drinks; but, should the strength rapidly decline, tonics must be administered. Quinine is the best, in two or three grain doses every four hours; let the vehicle be wine; if the stomach will not bear this, try an enema of thin starch, with three grains of the above tonic in it. To allay the burning and itching, arrowroot, flour, powdered starch, magnesia, or rye meal should be dusted over the parts affected; should these not afford the desired relief, try bathing with tepid water, poppy fomentations, or a tea made of buckwheat meal; a line drawn round the diseased part with caustic, so as to make a band about one inch in breadth, will frequently stop the spreading of the inflammation; care must be taken that no skin untouched by the caustic is left in the breadth of the band, or it may render the precaution nugatory. A lotion of lunar caustic, in the proportion of 1 scruple to 1 ounce of water, may also be applied with a camel-hair brush over the whole inflamed surface. In phlegmonous erysipelas, hot fomentations and poultices, leeches, and other depletive measures, must at once be resorted to, and this, as before mentioned, should be under the direction of the medical adviser.

The proper treatment of infantile erysipelas is to foment the inflamed parts with a strong and hot poppy decoction, and give every hour or two a tablespoonful of decoction of bark, or of this mixture: Sulphate of quinine, 6 grains; diluted sulphuric acid, 12 grains; tincture of gentian, 2 drams. A teaspoonful to be given every two hours. An enema of beef-tea or mutton-broth should be thrown up if the patient seems to require it.

Directly erysipelas sets in, and especially if it appears likely to assume a severe form, all the hair should be cut or shaved off the parts near where it commences. If not severe, it is best not to discolor the skin by applying caustic, but to use a lotion composed thus: Sugar of lead, 1 dram; rain or distilled water, 1 pint. Mix. Add tincture of opium, 1 dram. Wet rags to be kept applied.

Eclectic or Herbal Treatment for Erysipelas.—A poultice of cranberries has been found of great service. Boil till soft, mix with flour, and apply to the part affected. Poultices of elm bark and hop yeast have produced marked relief in allaying pain and healing the ulcerated surface. In chronic erysipelas, where it breaks out every few months, the following is very beneficial: Take one ounce each of blue flag root, yellow dock root, burdock root, bark of bitter sweet root, sassafras bark, and 2 ounces of elder flower. Add 6 pints of boiling water; cover the vessel, and let it steep for twenty-four hours; press the herbs; strain and sweeten. Dose, a wineglassful three times a day. Washing the parts affected two or three times a week in weak lye water is very beneficial.

Exhaustion.—The diminished power either of the body generally, or one or more of its organs, to continue its natural active operations, until it has been recruited by a period of repose.

Treatment.—As this derangement is commonly induced by excess of labor or continued exertion, in these cases the stomach is not receiving its full supply of nervous stimulation, and therefore its work must be made as light as possible, consistent with conveying proper nourishment into the system. Small quantities of food should be taken at a time, and more frequently repeated. In the majority of instances, the most efficient nourishment will be strong concentrated animal soup, either alone or with bread; and next in utility will be coffee or cocoa, along with bread or biscuit, or with the yolk of an egg beaten into them. The use of wines and spirits should be avoided as long as possible. But if extreme exhaustion exist, these latter will be found excellent agents for restoring the vital powers. A warm bath is also very grateful and efficacious in cases of exhaustion. Occasional doses of the following will stand in good stead: Peppermint-water, 1½ ounces; sal volatile, ½ dram; sweet spirits of nitre, 12 drops; compound spirit of lavender, 1 dram; syrup of cloves, ½ ounce. Mix. Dose, two tablespoonfuls. In cases of extreme exhaustion, the following may be used in aid of, or as a substitute for, stimulants; chop some lean beef into small pieces, enclose it in a jar, and set it in an oven, or on the stove

for an hour and a half. It will then separate into three portions, fat, fibre, and liquid essence. Strain off the last, and separate the fat by means of a piece of blotting-paper, when a clear amber-colored liquid is obtained, of an intensely aromatic smell and flavor, very stimulating to the brain.

Eyes.—*Eclectic or Herbal Treatment.*—These simple means are sometimes the most useful that can be employed in eye complaints. For inflammatory affections, keep the patient in a darkened room, and give the eyes perfect rest. Bathe them with a little warm milk and water. Poultices of hops or poppy leaves are very good. If the pain is very severe, use stramonium leaves. The following is an excellent eye-wash: Yellow root, ½ ounce; green tea, ½ ounce; boiling water, 1 pint. Steep together, and add sulphate of zinc, 1 dram. When cold, strain through a white flannel. When the inflammation has decreased, use a wash compound of 1 dram each of powdered white hazel and golden seal leaves, with one gill of boiling water. Let the powders remain about ten or fifteen minutes, then strain; bathe the eye frequently during the day.

For chronic inflammation of the eyes, an excellent remedy is the following: Dissolve one ounce of gum camphor and two ounces of turkey oil; pour a few drops of alcohol on the camphor to cause it to pulverize; then add the oil, and rub them in a mortar till dissolved. Anoint the eyes two or three times a day.

For weakness of the sight and imperfect vision, a powder made of dried barberry-root and used as snuff, has been found very beneficial; as has also one grain of cayenne steeped in one ounce of water, a little dropped in the eye occasionally.

On the Care of the Eyes.—The eyes are in such sympathy with the body that a disordered stomach, enervating pursuits, or unwholesome diet or air will at once affect them. These matters should be studiously attended to. In reading or sewing always let the light strike from behind, and not in front of the eyes. Many eyes have been ruined by not attending to this matter. Glasses should be worn when difficulty is experienced in reading a book held less than eight inches from the eye. Glasses, if properly selected, will not injure the sight, but preserve it. It is better, however, not to use glasses till they are absolutely indispensable. Avoid quack eye ointments and washes. If the eye is diseased, consult a respectable surgeon. Practice temperance in all things.

Fainting (*Syncope*).—This is a state of total or partial unconsciousness, occasioned by diminished action of the heart, causing less rapid circulation of blood through the brain.

Causes.—The causes of it are various, and sometimes very peculiar, such as a particular smell; that of a rose, for instance, has been known to occasion it; certain objects presented to the sight; surprise, joy, fear, or any sudden emotions; loss of blood, or anything which tends to debilitate the system by diminishing the vital energy.

Symptoms.—The first sensation of fainting to the patient himself is generally a singing in the ears; then the sight becomes confused, and all the senses deadened; a clammy sweat breaks out over the person, the countenance becomes deadly pale, and the limbs refuse to support the weight of the body, which sinks to the earth as helpless and motionless as a corpse; indeed, the condition so closely resembles that of death, that it is difficult to distinguish it therefrom. This is a complete faint; frequently the fits are only partial, and very limited in duration.

Treatment.—Place the patient in an horizontal position; free the face, neck, and upper part of the chest from all incumbrances; let the fresh air play freely upon them, and sprinkle the former with cold water; holding to the nostrils from time to time some volatile stimulant, such as hartshorn or ammonia; as soon as swallowing can be accomplished, administer about thirty drops of spirit of wine, or sal volatile, in water. The after-treatment will of course depend on the cause.

As the first stage of some forms of apoplexy and paralysis is one of faintness, a little discrimination should be used in the administration of stimulants. Where the seizure, too, is in consequence of loss of blood, no violent efforts at restoration should for a time be made, as this state is necessary for the patient's safety.

Persons subject to fainting should be careful in frequenting crowded rooms, or going anywhere where the air is bad. Tight dresses should be avoided; and no excitement be allowed. A well regulated diet, cold bathing, and vegetable tonics will usually cure this distressing infirmity.

Falling of the Fundament.—Prolapsus of the lower gut at the fundament most frequently occurs with children and aged persons, although it does occur at all ages, and commonly in connection with piles, irritation from worms, or stone in the bladder; much straining at motions of the bowels will also occasion it.

Treatment.—The gut may generally be returned without difficulty, by means of gentle pressure with the fingers, covered with a piece of greased rag. If allowed to remain down long, it

will become swollen with congested blood, and require the aid of a physician. Children so affected should have their bowels kept in a lax state with gentle aperients, and they should not be suffered to remain long on the stool; the loins should also be bathed with cold water; and an enema, consisting of a grain of sulphate of iron, dissolved in an ounce of rain-water, should be thrown into the bowels after each motion.

Fig. 94.



For this kind of prolapsus a pessary is seldom necessary, but a bandage like Fig. 94 may be used with advantage. Here we have a centre-piece, tolerably broad, to which is attached an oval pad of some smooth, hard material; a back-strap passes up, and fastens to a belt around the body; and another strap, in two divisions, goes up the front, and also fastens to the belt. This, if properly managed, will exert all the pressure necessary to keep the gut from protruding.

Felons.—As soon as the disease is felt, put directly over the spot a fly blister, about the size of your thumb-nail, and let it remain for six hours, at the expiration of which time, directly under the surface of the blister may be seen the felon, which can be instantly taken out with the point of a needle.

Another speedy cure is, take half a teaspoonful of soft soap, and stir in air-slaked lime until it is thick as putty. Make a leather thimble, fill it with the mixture, and wear.

Fevers in General.—A fever is the most general disease incidental to the human race. It attacks all ages, sexes, and constitutions, and affects the system throughout both body and mind. Fevers may be divided into three classes, viz., *continual*, *remitting*, and *intermitting*. A *continual fever* is that which never leaves the patient during the whole course of the disease. This kind of fever is divided into *acute*, *slow*, and *malignant*. The fever is called *acute* when its progress is quick and symptoms violent; but when these are more gentle, it is called *slow*. When livid spots appear, showing a putrid state of humors, it is called *malignant*, *putrid*, or *black fever*. A *remitting fever* differs only from a continual in a degree: it has frequent increases and decreases, but never wholly leaves the patient during the course of the disease. *Intermitting fevers* (agues) are those which, during the time the patient may be said to be ill, have evident intervals and abatements of the various symptoms.

A fever is an effort of nature to free the body from some offending cause, and it only requires attention to observe the way nature points, and endeavor to assist her operations. Our bodies are framed so as to throw off, or expel, whatever is in-

jurious to the health. This is generally by urine, sweating, stool, vomit, expectoration, or some other evacuation; and there are many reasons to believe if the efforts of nature were attended to and promoted at the begining of fevers, they would seldom last twenty-four hours; but if the efforts are neglected or counteracted (as they often are), is it to be wondered at if the disease is to be prolonged, and in many cases made fatal? We here give a few general causes, symptoms, and remedies which are applicable to most fevers at the commencement.

Causes.—The causes are mostly obstructed perspiration, neglected colds, intemperance, and sometimes infection.

Symptoms.—Sickness, squeamishness, sense of weakness or languor, pains in the head, back, and limbs; chillings or shiverings, alternately with hot fits, thirst, a foul, furry tongue, unpleasant taste, a dry hot skin, and a quick pulse.

Treatment.—If the stomach is oppressed or overloaded, take a vomit, as follows: Flour of mustard, one ounce; warm water, half a pint. Mix. Take half of it, and if it does not act in fifteen minutes, take the other half; drink warm camomile tea to help its operation; when it has acted freely, take a mild purgative. When the bowels have acted freely, take the following: Solution of acetate of ammonia, 3 ounces; cinnamon water, 2 ounces; wine of tartarized antimony, 2 drams; syrup of orange peel, 1 ounce; pure water, 6 ounces. Mix, and take three tablespoonfuls every four hours.

Fever and Ague (*Intermittent Fever*).—A fever is said to be intermittent when it consists of a succession of paroxysms, between each of which there is a distinct and perfect intermission from fever symptoms. Agues are of three kinds, called *quotidan* (the fit comes on about every twenty-four hours); *tertian* (or the fit comes on every forty-eight hours); *quartan* (or the fit comes on about every seventy-two hours).

Causes.—Living or being exposed amongst stinking stagnant water, especially when acted on by heat; poor, watery diet, great fatigue, sleeping in damp rooms or beds, wearing damp or wet linen; being exposed long and often to a moist atmosphere, suppression of eruptions, etc.

Symptoms.—The cold stage commences with a sense of languor and debility, and slowness of motion; frequent stretching and yawning; pain in the head and loins; sometimes sickness and vomiting; pulse small, frequent, and irregular; urine pale; to this succeeds a violent shivering and shaking; the patient feels very cold, and the breathing small, frequent and anxious, sensibility is much impaired. After a time these symptoms abate, and the

second stage commences, with an increase of heat and fever all over the body, redness of the face, dryness of the skin, thirst, pain in the head, throbbing temples, the tongue furred, the pulse becomes dry, hard, full, and regular; when these have continued some time, a moisture breaks out on the forehead, which by degrees becomes a general sweat all over the body, the fever abates; the water deposits a sediment; the breathing and pulse are free, and the fit is over, but leaves the patient in a weak state.

Treatment.—In the cold stage, give warm diluent drinks, such as barley-water, weak tea, or weak wine and water. Apply external warmth by means of extra clothing, hot bottles to the feet, mustard foot-baths, bags of heated bran, baked salt, etc. In this stage, an opiate is often beneficial; give twenty-five to thirty drops of laudanum, with an equal quantity of ether, in a glass of water. During the hot stage, an opposite mode of treatment must be adopted. Sponge the surface with tepid or cold water, give cold diluent or iced drinks, and administer a full dose of laudanum. When the hot stage has subsided into the sweating stage the action of the skin should be encouraged by tepid drinks; and if the system is much exhausted, weak spirit and water in small quantities may be occasionally ventured on. During the intermissions, administer active aperients, as five grains calomel, with three grains of compound extract of colocynth, followed by a mild purgative. Give bark to an extent as great as the stomach will bear, and combine with it wine and aromatics, accompanied by a generous but light diet, and moderate exercise. Quinine is a very powerful agent in ague; two or three grains of this medicine, administered twice or thrice daily, with such nourishing diet as the patient can take, will, in ordinary cases, put a speedy end to the disease. In cases of long standing, which resist the usual modes of treatment, the following remedy may be had recourse to: Iodide of potassium, one and a half drams; peppermint water, twelve ounces; take two tablespoonfuls every four hours. One or two grains of sulphate of quinine may be added to each dose. Agues are liable to return, and the persons subject to the complaint are always made aware of its approach. In such cases, the fit may be rendered milder by taking one scruple of ipecacuanha in an ounce of water, as an emetic, an hour previously. Sick persons should also take occasional doses of sulphate of quinine twice a day for three or four weeks; in spring and autumn, especially, night air must be avoided; and the early morning air not attempted, until some warm fluid or food has been introduced into the stomach.

Bilious or Remittent Fever.—When a fever is accompanied with a frequent or copious evacuation of bile, either by vomit or stool, the fever is denominated bilious, most frequent in the country at the latter end of summer or beginning of autumn.

Causes.—Exposure to damp or night air; frequently from intemperance, when the body is disordered from cold or exposure, or similar to ague.

Symptoms.—Frequent flushings and shiverings, with vomiting, bilious phlegm, and sometimes purging, same as bilious diarrhœa.

Treatment.—Cleanse the stomach with the following: Emetic tartar, one grain; powdered ipecacuanha, fifteen grains; water, three tablespoonfuls; mix and take; drinking warm camomile tea till it operates; and the bowels with this: Epsom salts, six drams; glauber salts, three drams; infusion of senna, seven ounces; tincture of jalap, half an ounce; compound tincture of cardamoms, one ounce; mix, and take two tablespoonfuls every four hours till it operates freely. Then take for a day or two the following: Subcarbonate of potash, four drams; purified nitre, one dram; syrup of saffron, six drams; camphor mixture, twelve ounces; mix, take two tablespoonfuls every four hours, with one of the following powders each time in the dose; citric acid or tartaric acid, half an ounce; divide into twelve powders, mix in the draught, and drink whilst effervescing.

When the fever has subsided, take for a week or two the following pills: Sulphate of quinine, two drams; extract of gentian, three drams; mix well; divide into sixty pills, and take one every four hours. Then use the following excellent drink: Take well-crushed pale malt, three lbs.; dried wormwood, dried century, dried horehound, dried buckbean, dried betony, dried camomile, dried ground ivy, of each one ounce (but if fresh two ounces); gentian root, sliced, one ounce; Virginia snake root, sliced, one ounce; infuse all in two gallons of hot water, in a warm place, two hours, then boil together fifteen minutes, then strain off the herbs, etc., squeeze as dry as possible, put in two pounds of sugar, and boil again ten minutes; when cool enough, put in some fresh yeast; work it well for two days, then bottle in sound bottles, putting two tablespoonfuls of brandy to each quart. This is remarkably good for weakness, etc. Take three tablespoonfuls three times a day, with a teaspoonful of the compound tincture of bark in each dose.

Acute or Inflammatory Fever.—This mostly attacks the young, or those about the prime or vigor of life, especially

such as live well, and are full of blood. It attacks at all periods of the year, but is most frequent in spring and the beginning of summer.

Causes.—Anything that overheats the body, as violent exercise, sleeping in the sun, drinking strong liquors, &c. It may also be caused by lying on the damp ground, drinking cold liquor when hot, being exposed to the night air, and the like.

Symptoms.—It usually commences with a chilliness, which is soon succeeded by a burning heat, quick, full pulse, pain in the head, redness of the eyes, florid, flushed countenance, dry skin, pain in the back, loins, &c. To these succeed difficulty of breathing, sickness, inclination to vomit, no appetite, restless, tongue black, furred, and rough, urine very red. Delirium, great oppression of the breast, laborious breathing, frequent startings, hiccups, and cold clammy sweats are very dangerous symptoms.

Treatment.—Sometimes bleeding is necessary, especially if there be much inflammation. If vomiting be indicated, give an emetic. About three hours after, give a purging draught.

The next day take the following: Tartrate of antimony, 12 grains; loaf sugar, 2 drams. Powder, and mix well together, and divide into twenty-four powders. Take one every three hours, in three tablespoonfuls of the following: Nitrate of potash (saltpetre), 1 dram; solution of acetate of ammonia, 3 ounces; syrup of orange peel, 1 ounce; pure water, 8 ounces. Mix. Take three tablespoonfuls as above directed. The thirst being very great, we recommend the following: Pearl barley, stoned raisins, and figs, of each, 4 ounces; liquorice-root, sliced, 1 ounce; water, 4 quarts. Wash the barley well; boil a few minutes, then strain off; throw the water away, and put into four quarts of boiling water; boil the barley an hour, then add the raisins, figs, and liquorice, and boil down to two quarts; when boiled, add to it purified nitre (saltpetre), half an ounce. A teacupful occasionally to quench the thirst is very serviceable. The diet low and light—oatmeal or sago gruel, tapioca, or the like. Wash the patient occasionally with lukewarm water, especially the hands and feet, and sprinkle the chamber occasionally with vinegar, more especially if the weather be hot; and have some vinegar in a jar, and occasionally plunge a red-hot iron in it. This will purify the air much, and refresh the patient.

Slow or Nervous Fever.—This is a very common fever amongst the sedentary, or those of weak, relaxed habits.

Causes.—Whatever depresses the spirits, or impoverishes the blood, as grief, fear, anxiety, want of sleep, intense thought,

living on poor, thin diet, unripe fruits, or cold moist things, as cucumbers, melons, mushrooms, or the like; also damp, confined, unwholesome air. Hence it is common in rainy seasons, or amongst those who live in low, damp, close places.

Symptoms.—Low spirits, want of appetite, weariness after motion, watchfulness, deep sighing and dejection of mind are mostly the forerunners of this disease. These are succeeded by a low quick pulse, a dry tongue, without great thirst, chilliness and flushing alternately. After some time the patient feels a giddiness and pain in the head, a sickly feeling, with retching and vomiting; the pulse is quick and intermittent, the urine pale, looking like dead small beer; the breathing difficult, with oppression of the breast, and sometimes slight delirium,—when towards the ninth, tenth, or twelfth day, the tongue becomes moist, with a plentiful spitting, a gentle purging, or moisture on the skin, or some eruption takes place about the nose, lips, or ears. Then mostly all danger is past; but if there be excessive looseness, wasting sweats, with frequent fainting fits, the tongue when put out trembles much, the extremities feel cold, with a fluttering pulse, then great danger exists.

Treatment.—If the sickly feeling is great, give the following emetic: Powdered ipecacuanha, 20 grains; wine of antimony, 1½ drams; pimento-water, 1½ ounces.

Cleanse the bowels with the following purge: Powdered rhubarb, 2 drams; carbonate of magnesia, 1 dram; tincture of ginger, 3 drams; compound tincture of cardamoms, 6 drams; cinnamon water, 9 ounces. Mix. Take four tablespoonfuls every three hours till it operates freely.

Take the mixture recommended for acute fever. When the fever is subdued, and the patient appears low, give the following cordial: Carbonate of ammonia, ½ dram; compound tincture of cinnamon, 3 drams; syrup of ginger, 6 drams; compound spirits of lavender, ½ ounce; pure water, 3 ounces; camphor mixture, 8 ounces. Mix. Take three table-spoonfuls three times a day. If delirious, a blister at the back of the neck may be of much service. The diet must be mostly light, but nourishing and good.

Typhus fever.—Typhus fever is a kind of continued fever, characterized by the ordinary symptoms of other fevers, accompanied with debility in the nervous and vascular systems, and a tendency in the fluids to putrefaction.

Causes.—Any of the ordinary causes of fever may give rise to typhus, but by far the most common cause of typhus is contagion, or febrile miasm, the activity of which is much increased

by the crowding in close and ill-ventilated places, filth, insufficient nutriment, and other causes tending to depress the vital power. It is eminently contagious and infectious, and often prevails epidemically.

Symptoms.—The symptoms are great prostration of strength, heat intense, pungent, and more biting than in any other fever; pulse hard, small, weak, and irregular; nausea, vomiting, sometimes a greenish or blackish colored bile, countenance flushed, tongue parched and black furred, and thirst is excessive. In the worst cases black or purple spots appear, the urine is but little changed, and there is a peculiar fœtid smell, in cases of true typhus; and sometimes there are discharges of blood. The duration of this fever is uncertain: sometimes it terminates between the seventh and fourteenth day, and sometimes it is prolonged five or six weeks. Its duration depends greatly upon the constitution of the patient, and the manner of treating the disease. The most favorable symptoms are a gentle looseness, after the fourth or fifth day, with a warm sweat. These will continue some time, and carry off the fever. Hot scabby eruptions about the mouth and nose are good signs, as are also abscesses.

The unfavorable symptoms are excessive looseness, with a hard swelled belly, black or livid blotches breaking out, sore mouth, cold clammy sweats, change of voice, inability to put out the tongue, a constant inclination to uncover the breast, difficulty of swallowing, sweat, and spittle tinged with blood, and the urine black, or depositing a black sediment, shows great danger.

Treatment.—In the early stages of this disease it is best not to interfere much with nature's operations. The principal aim ought to be to keep the patient alive until the fever-poison has expended itself. When seen early, however, it is often of advantage to administer an emetic or a purgative; and the patient's uneasy sensations will be much soothed by sponging the surface of the body with cold or tepid water. Directly the powers of life begin to fail, a stimulating course of treatment should be commenced,—such as strong beef or chicken tea, with wine or brandy frequently administered, taking care that it does not aggravate the febrile symptoms. When there is much general irritability and sleeplessness, a dose of opium may be given. The patient should be in a large, well-aired apartment, and the windows kept open as much as possible. As the patient begins to recover, a course of tonics will be necessary to expedite his restoration to health.

Typhoid Fever.—Typhoid fever resembles in its main features that of typhus; and until very recently the two were generally regarded as but two stages of the same affection.

Symptoms.—Typhoid fever usually commences more insidiously and more gradually than typhus. The sufferer is less dull and stupid, but more anxious, and during the delirium decidedly more active, and even vivacious. Diarrhœa is almost always present in typhoid fever (often accompanied with hæmorrhage), very rarely in typhus. In the former the eruption consists of rose-colored spots, thinly scattered, and often entirely absent. Typhoid fever is most common in youth, and rarely attacks persons after forty, while typhus may occur at any age; and the former does not reach its height for a week latter than the later.

Treatment.—In general the treatment required in both cases is alike, except in one or two particulars. At the commencement of typhoid, emetics are of service; but aperients should rarely be given, in consequence of the tendency to diarrhœa. The intestinal irritation and diarrhœa require for their treatment astringents, combined with opium, which may be administered either by the mouth or rectum. If there be hæmorrhage from the bowels, cold ought to be applied carefully over the abdomen. During convalescence, the patient requires to be carefully attended to, as relapses are apt to occur; and the return to a generous diet must be very gradual.

Yellow Fever.—This is a disease of hot climates, a species of typhus, which takes its name from one of its symptoms, but which is not, however, an essential one.

Causes.—Probably a vitiated state of the atmosphere, from putrid exhalations, arising from putrifying vegetable or animal substances in hot, sultry weather. It is an epidemic, and very contagious.

Symptoms.—Costiveness, dull pain in the right side, defect of appetite, flatulence, perverted tastes, heat in the stomach, giddiness or pain in the head; dull, watery, yellow eye; dim or imperfect vision, hoarseness, slight sore throat, and the worst features of typhus.

Treatment—In this disease, good nursing is indispensable. Let the patient have perfect rest and quietness, in a well-ventilated room. In the early stages of the disease, the diet must be confined to preparations of sago, arrow-root, barley, etc.; but as the disease advances, give animal broths made of lean meat, thickened with bread-crumbs, oat-meal, or barley. The strictest attention must be given to cleanliness, and the linen changed frequently. If the stomach be very irritable and

the vomiting violent, give the following preparation: Powdered rhubarb, 20 grains; powdered saleratus, 20 grains; powdered peppermint, 1 teaspoonful; laudanum, 15 drops; brandy, 1 tablespoonful; boiling water, 1 gill. Mix. Sweeten with loaf-sugar, and give a tablespoonful every hour till the symptoms change. The bowels must be kept open, as in all fevers. For this purpose use the following: Ginger, 2 ounces; bayberry bark, 4 ounces; cayenne pepper, ½ ounce.

Dose, a teaspoonful in a little milk, with half a teaspoonful of powdered rhubarb every hour till it operates freely.

Captain Jonas P. Levy, who has had an extensive experience with yellow fever, states that he never knew a case of yellow fever terminate fatally, under the following treatment:—

Dissolve a table-spoonful of common salt in a wineglass of water; pour it into a tumbler, and add the juice of a whole lemon and two wineglasses of castor-oil. An adult to take the whole at one dose. Then give a hot mustard foot-bath, with a handful of salt in the water. Wrap the patient in blankets until he perspires freely. Remove to the bed, and well wrap the patient's feet in the blanket. Afterward apply mustard plasters to the abdomen, legs, and soles of the feet. If the headache is very severe, they may be applied to the head and temples. After the fever has been broken, take forty grains of quinine and forty drops of elixir of vitriol to a quart of water. Give a wineglassful three times a day. Barley-water, lemonade and ice-water may be used in moderation.

Fistula.—This is an abscess degenerating into an ulcer near the anus, which ulcer has often a connection with the lower gut.

Causes.—Persons who follow occupations constantly sitting, are most liable to them; they are also produced by blows over the part, sometimes by intemperance.

Treatment.—Sometimes a cure will be effected by attending to the general health, and the injection of some astringent lotion as solution of sulphate of zinc (forty grains to one pint of water). Failing this, it will be necessary to make a complete division with the knife of the whole of the parts between the fistula and the bowel, and the edges of the wound kept apart by lint, in order to allow the cavity to fill up by granulation.

Fœtid Breath.—The odor of the breath is a pretty correct index of the state of the body. When tainted it is so not uncommonly from decayed teeth, or from a morbid secretion of the tonsils; but more frequently, in children especially, it is indicative of disordered stomach and loaded bowels.

Treatment.—Rinse the mouth out two or three times a day with a weak solution of soda or chloride of lime, or take half a tumbler-full of camomile tea on rising every morning, or wash the mouth with salt water in the morning, and clean the teeth afterwards with water mixed with wood ashes (a pinch of ashes to a glass of water).—The following is very efficient: Take of white sea-salt one and a half ounces; tartrate of potass and essential oil of bergamot or mint, of each two drachms; white sugar and gum-tragacanth in powder, of each eight ounces. Dry the salt, sugar, and gum by the fire, and reduce them to a very fine powder in a very hot mortar; make the powder into a paste with a little water and the essential oil; roll the paste out to about the eighth of an inch, and divide it into lozenges. Dry them in a dish or basin in the oven; when perfectly dry, cover them with a coating of gum-tragacanth, and dry them again afterwards quickly by the fire. Keep them in a well-closed box. These lozenges are simply chewed, and not taken internally, nor ought the saliva to be swallowed that is secreted while chewing them. When you have finished chewing, rinse the mouth with water. These lozenges will not only cure foulness of breath but will take away the smell of tobacco, onions, &c.

Gall Stones.—Gall stones are calculous concretions, sometimes formed in the bladder; they vary greatly in size, some being smaller than a pea, and some as large as a walnut; they often remain in the bladder without causing any uneasiness; but, when one of any considerable size passes into the duct, it gives rise to violent spasmodic pains, which cease only when the stone has effected its passage into the bowels. The gall duct is, in calibre, no larger than an ordinary goose quill, and therefore this operation is often a difficult and protracted one; its symptoms are agonizing pain in the region of the bladder, often accompanied by shivering and vomiting; when the obstruction has passed into the common duct, and so stopped the flow of bile from the liver, there will be jaundice, with white and chalky evacuations. When there are these symptoms, with absence of pain on pressure, and no fever, we may safely conclude that inflammation is not the exciting cause, but gall stones; their presence in the feces may be easily detected, as they float upon water.

Treatment.—The proper treatment in an attack of this kind is hot applications over the seat of pain, or a warm bath. A draught should at once be given of laudanum, a full dose of thirty drops, following it up with twenty drops every half hour or so, until the severe pain is relieved; if the patient retches

much, and liquids cannot be retained, pills of solid opium, one grain each, had better be administered. There is commonly great acidity of the stomach while gall stones are passing; hence an alkaline draught is of service, say half a teaspoonful of carbonate of soda in a good quantity of warm water; the laudanum may be added to this. Should the stomach reject these remedies, the anodyne must be administered in a clyster, of about forty drops of laudanum in a pint of thin gruel. Hot bran poultices, sprinkled with laudanum, may be applied to the seat of pain.

The following is a good solvent mixture where gall stones are known to be present: Castile soap, two drams—melt by heat in half a pint of water; add spirits of turpentine and ether, of each two drams, take a tablespoonful three times a day.

Gangrene (*Mortification*). Gangrene is the first stage of mortification, so called from its eating away the flesh. Gangrene may be considered as a partial death—the death of one part of the body while the other parts are alive.

Causes.—The causes are excessive inflammation, sometimes from hurts or injuries.

Symptoms.—All pain and sensation ceases in the part; and, if extensive, it turns from red to purple, livid, or black, with a quick low pulse and clammy sweats. If internal, there is a cessation of pain, but the body sinks and changes to a livid color, and often hiccups and other distressing symptoms attend. The face is pinched with cold, and the tongue brown.

Treatment.—When the result of cold, the part becomes first white, and a restoration of the suspended circulation should be attempted by rubbing with snow, if it can be procured; if not, with a coarse cloth or flesh brush. No heat must be applied; even that of the bed-covering will sometimes set up inflammation. Camphorated spirit of wine is, perhaps, the best liniment that can be used. After the rubbing, if it appears to be at all effectual, apply cold poultices. If, in spite of these efforts, a discoloration of the skin shows that gangrene has really commenced, apply to the part a poultice of flax seed with a little powdered charcoal in it, and also spirit lotions, to keep the disease from spreading. The constitution of the patient must be soothed and supported by some anodyne and stimulent. Cooper recommends from 7 to 10 grains of carbonate of ammonia, with 20 or 30 drops of tincture of opium, two or three times a day, or more frequently if required, A bolus composed of 5 grains of carbonate of ammonia, with 10 grains of musk, may be given every four hours, with excellent effect. When the gangrene has proceeded to a sloughing sore, a port wine poultice

is a good application, as is spirits of turpentine, to stimulate the parts.

If, however, the gangrene is not stopped in its first stages, it can seldom be after; and the only chance of saving the patient's life is to amputate the limb; and this must be done before the morbific influence has spread far towards a vital part.

Hospital Gangrene is a combination of humid gangrene with phagedenic ulceration, sometimes occuring in crowded hospitals, and causing a fearful mortality among the patients.

Glanders (*Farcy*).—This is a malignant disease occuring in the horse, the ass, and the mule, which man is liable to contract, by inoculation, or by simple contact with the skin. It is a horrible and loathsome disease, and very commonly proves fatal. An animal affected by it should at once be killed, and the body buried.

Symptoms.—The chief symptom of its presence in the animal is inflammation of the lining membrane of the nostril, which becomes ulcerated, and emits a bloody, fœtid, sticky, yellowish discharge. Shortly after the person contracts the disease there will be febrile symptoms, probably vomiting and diarrhœa; small ulcerating tumors will form under the skin in various parts of the body, and the peculiar viscid discharge from the nostrils, which is the characteristic of the disease, will commence. No domestic treatment will be of service here. A physician should at once be consulted.

Glandular Swellings.—Weak and scrofulous persons are frequently troubled with these swellings. They often occur in the neck, and under the arm, as well as elsewhere.

Treatment.—Stimulent applications, and a general tonic course of treatment should be resorted to in such cases. Salt water bathing, and drinking mineral waters, are among the most efficacious remedies. If these cannot be obtained, let the patient take a mixture like this:—Sulphate of iron, 12 grains; sulphuric acid (diluted), 1 dram; sulphate of quinine, 24 grains; tincture of ginger, 2 drams; distilled water, sufficient for 12 ounces. Take a tablespoonful three times a day, with good nourishing food. If the bowels are at all confined, add to the mixture 6 drams of sulphate of magnesia. Paint the swollen part with tincture of iodine every night.

Gonorrhea.—Gonorrhea or clap is not, as its name implies, a discharge of true semen, but consists of a purulent discharge from the urethra, being the effect of inflammation of a specific character attacking the extremity of that passage, and in certain cases extending through its whole course.

Symptoms.—This disease begins to make its appearance in some persons about the third or fourth day, and in others in a week or two after connection, but the average time is from three to twelve days. About the third day, generally speaking, the orifice of the urethra begins to swell, the patient feels a certain degree of uneasines in the parts, there is a sensation of itching in the glans of the male organ, and a soreness and tingling in the course of the urethra; the lips of the orifice are, at first, drier and hotter than natural; but in a short time a white purulent discharge makes its appearance, which as time advances increases in quantity. There is now great pain and scalding in passing water, in consequence of such a fluid as the urine, which is loaded with saline matter, passing over an inflamed surface; and from the inflammation of the lining membrane diminishing the size of the passage, the urine is voided in a smaller stream than natural, and sometimes with difficulty. The discharge in the course of a few days considerably increases, and changes its appearance, being sometimes greenish and sometimes of a yellowish cast; the patient is troubled with frequent and painful erections, particularly when he gets warm in bed—this affection is called chordee. In the mild form of this disease, it is unaccompanied by any constitutional symptoms, and will, by strict attention to diet, rest, and cleanliness, run itself off in the course of five or six weeks without the aid of medicine, or any treatment except that just recommended.

In the severe form of the disease, arising either from natural causes, intemperance, or the use of strong astringent injections, the inflammation, instead of being confined to the first inch and a half of the urethra, may extend the whole length backward, implicating the prostate gland, neck of the bladder, and the lining membrane of that organ. In these cases, the patient is tormented with a frequent desire to pass water, which is voided with great difficulty, and only by a few drops at a time. There is great constitutional disturbance, and fever of an inflammatory character. It is also frequently accompanied by enlargement of the glands of the groin, arising from inflammation of a set of vessels called absorbents, which lead from the diseased surface in the urethra into them; these are called sympathetic buboes, in consequence of their increasing or diminishing in size according to the amount of inflammation in the passage—they do not frequently proceed to suppuration. From the same cause—that is, extension of inflammation along the spermatic tube—there will be inflammation and enlargement of one or both testicles. In such cases the discharge will disappear for a time, and

as there may be a good deal of constitutional disturbance and fever, all stimulating medicines and astringent injections should be suspended—this affection frequently arising from their improper use. It may also be accompanied by one or more abscesses along the urethra, which frequently communicate with that passage.

Chordee is a most troublesome affection in this disease, and consists in the painful erection of the penis, the top being bent downward: this arises from inflammation of the cells surrounding the urethra, which prevents its extension during erection, when all the other parts of that organ are filled with blood. When the inflammation runs high, it sometimes happens that, in making water, a small blood vessel is ruptured, and a flow of blood ensues, which is of great service unless it should be too copious, when it must be stopped.

In persons troubled with tight foreskins, the matter from the urethra becomes collected between the foreskin and glans of the penis, producing excoriation of the latter, and inflammation and swelling of the former; so that the patient is unable to draw it back from the glans: this state is called phymosis. On the other hand, when the foreskin becomes inflamed and swollen, and cannot be drawn over the glans so as to cover that part, it is called paraphymosis. Persons in whom the foreskin is naturally very tight, so that the glans of the penis is never exposed, are subject, when out of health or when the bowels are confined, to a discharge from beneath the foreskin, resembling in its character the discharge which takes place in gonorrhea: this discharge arises from irritation of a set of glands surrounding the glans of the penis, which pour out a purulent secretion that produces excoriation and inflammation of the parts. This disease is called spurious gonorrhea, and must be distinguished from true gonorrhea, as the treatment of the two will essentially differ.

Treatment.—In the mild form of this disease, and in the first stage when the discharge is fully developed, and the inflammation confined to the first inch and a half of the urethra, the first thing to be done is to open the bowels briskly. This may be effectually accomplished by administering the following powder: Powdered jalap, 20 grains; calomel, 4 grains. Mix. To be given in something thick at bed-time. Animal food, all stimulating drinks, such as ale, spirits, and wine, should be carefully abstained from. Great cleanliness should be observed, the penis should be bathed several times a day in hot water, allowing it to soak for a few minutes each time, and taking care to

wash off all discharge which might be collected between the foreskin and glans of the penis. The patient should rest as much as possible, and he should wear a suspensory bandage to keep the penis out of the way of all friction. His diet should consist of light farinaceous food, such as arrow-root, sago, or bread puddings; and for his ordinary drink, barley water or toast and water. Broths of an unstimulating character, such as mutton and chicken, might be both allowed occasionally. He should then take the following powder three times a day: Cubebs pepper, 1 dram; powdered gum arabic, 1 scruple; carbonate of soda, 10 grains. Make a mixture. To be taken in a little milk or water. This treatment should be continued for a few days, after which the doses of cubebs might be increased to two drams three times a day. Should the discharge still continue after persevering in this plan for eight or ten days, and when the active stage of the inflammation has subsided, the following mixture may be administered with advantage: Balsam copaiba, 3 drams; powdered gum arabic, 2 drams; camphor mixture, or common water, 6 ounces; spirit of lavender, ½ ounce; sweet spirit of nitre, ½ ounce. Mix. Rub up the copaiba with the gum arabic, first, in a mortar; then add the water by slow degrees, and when the copaiba becomes incorporated with the water, add the other materials: a tablespoonful to be taken every day. Should this quantity disagree with the stomach, or produce pain in the back, the dose may be diminished according to the age, strength, and peculiar circumstances of the patient.

The following is also a good form of mixture: Copaiba, 3 drams; powdered cubebs, 6 drams; laudanum, 30 drops; powdered gum arabic, 2 drams; common water, 6 ounces. A tablespoonful three or four times a day. Care must be taken to keep the bowels gently open during the treatment. The following is a good aperient pill for the purpose: Compound colocynth pill, 1 dram; calomel, 6 grains; oil of caraway, 6 drops. Mix, and divide into twelve pills; one or two to be taken every second or third night. It sometimes happens that the copaiba disagrees very much with the stomach, producing indigestion and eructation of a rancid fluid into the mouth; also fever and nettle rash. In these cases it should be suspended for a time, or altogether omitted.

In the severe form of this disease, when the inflammation extends as far as the neck of the bladder, bleeding should be resorted to immediately; the blood may be taken from the arm of the patient, if he be of a full stout habit, or leeches may be applied to the amount of ten or twelve along the perineum and urethra,

which may be repeated, according to necessity, once or twice a week. Fomentations, consisting of flannels wrung out of hot water, should then be applied, or large poultices of linseed meal, or bread and water, three or four times a day; or the patient may sit in a hip bath once or twice daily; strict rest in the recumbent position should be enjoyed; and for the purpose of keeping the bowels open, the following mixture should be administered: Epsom salts, 6 drams; tartar emetic, 1 grain; mindererus spirit, 1 ounce; syrup, ½ ounce; camphor mixture, 5 ounces. Two tablespoonfuls to be taken every two or three hours. In order to allay irritation, and relieve the pain, heat, and difficulty in making water, the patient should drink freely of barley water, linseed tea, or solution of gum in milk. Some recommend the use of soothing injections in this stage. The injection should consist of—Warm water, 8 ounces; vinous solution of opium, 60 drops. This should be thrown into the urethra several times a day.

If the patient should be troubled with a frequent desire to make water opium administered by the mouth or rectum is of the greatest service. The following is a good draught in these cases; Tincture of opium, 30 drops; syrup, ¼ ounce; camphor mixture, 1½ ounces. Make a draught; to be taken once or twice in twenty four hours, according to the intensity of the pain. Or an injection consisting of two ounces of thin gruel, and half a dram of tincture of opium, may be thrown into the rectum.

Stricture is frequently the result of this form of the disease. When the active stage has been reduced by the means already laid down, the discharge may be treated by astringents, both internally and externally. The form of mixture already prescribed will answer. Astringent injections may be also employed with advantage—either of the following may be used: Sulphate of zinc (white vitriol), 30 grains; wine of opium, ½ dram; water, 6 ounces. To be thrown into the urethra three or four times a day.

Or take: Nitrate of silver (lunar caustic), 4 grains; distilled water, 1 ounce.

One of the most painful, and sometimes most troublesome consequences of gonorrhea, is inflammation of the testicle. This affection, usually termed "swelled testicle," may occur at any period of the disease; and although its occurrence may be favored by improper treatment or mode of living, is in most cases independent of such causes. It arises from extension of the inflammation from the urethra down the spermatic canals to one or both testicles, but usually attacks only one at a time.

It is best to be avoided by careful attention to regular living and quiet, during the inflammatory stage of the gonorrhea. It commences sometimes with pain in the testicle itself, and sometimes the pain is felt first in the groin, in the situation of the spermatic cord. If its approach is thus perceived, the application of numerous leeches in the groin, or of cupping to the loins, with rest in the recumbent posture, and suspension of the scrotum in a proper bandage, will frequently prevent the extension of the inflammation to the testicle itself. Should the inflammation, however, have reached that organ, or commenced in it, the most immediate relief will be obtained by carefully surrounding the swelled testicle with narrow strips of adhesive plaster, together with perfect rest, the testicle being further supported in a bandage; and should the pain extend to the groin, the application of leeches in that situation will usually put a stop to the disease in a few days. As many, however, will be unable to apply the strapping in a proper manner, and as it is only applicable in the early stages of the affection, it may be as well to say that usually the inflammation will subside spontaneously in a few days, if the patient will keep quietly lying on his back with the testicles supported in a proper bandage, and fomented either with hot water, and cool with cold water, as his feelings may dictate. The bowels should be kept open by saline purgatives, such as Epsom salts, etc., and the diet should be low. If there is much pain in the groin, flank, and back, leeches should be applied in the former situation, or cupping in the latter, and a full dose of Dover's powder should be taken at bed-time. In extremely painful cases, great relief will be experienced by the the application of a tobacco poultice to the scrotum. This may be made by mixing equal parts of tobacco and meal together, and moistened with hot water.

Mercury is never requisite in this affection, and leeches should never be applied to the scrotum itself. The swelling of the testicle in most cases, leaves hard swelling on the back of the gland, which is gradually removed in process of time; but during its existence, care should be taken to keep the testicles well supported in a suspensory bandage, as relapses under neglect of this precaution are not unfrequent.

In phymosis, the glans of the penis frequently becomes excoriated from the irritation of the matter from the urethra, and warty excrescences grow between the glans and the foreskin. In order to prevent such effects, great cleanliness should be observed, the foreskin should be drawn back as far as possible and the matter washed off, and warm water should be thrown under

the foreskin several times a day by means of a syringe. If excoriation or warts exist, black wash will be of the greatest service—it should be used in a similar manner to the warm water. Black wash is made by mixing thirty grains of calomel with two ounces of lime water—to be well shaken when used. The bowels should be kept gently open by means of the common black draught.

Treatment of Chordee.—We have observed before that chordee consists in a painful erection of the penis, produced by the non-extension of the spongy cellular body surrounding the urethra, while all the other parts of the penis are distended with blood. This want of harmony between the parts occasions the penis to be bent downward, and also the pain which is experienced by the patient during an erection. In order to obviate this, the penis should be rubbed with strong solutions of opium, such as the tincture; or pledgets of linen, wet with the tincture of opium, should be constantly applied, taking care to change them as often as they become warm; or it may be rubbed with the following application, which is found of great service in this affection: extract of belladonna, 2 drams; camphor, 10 grains. Rub up the camphor into a fine powder, having previously dropped on it a few drops of spirit of wine, then add the belladonna; about the size of a small pea of this, rubbed along under the surface of the penis, and upon the frænum and bridle, quickly brings down an erection and relieves pain. All lascivious ideas should be dismissed from the mind. The bowels should be kept open by a mild aperient. As the erections generally come on more frequently when the patient becomes hot in bed, the best means of temporarily relieving it will be to bend the penis downward with the hand, and to apply cold; but the most certain means of preventing it will be to administer at bed-time the following draught: tincture of opium, 20 drops; camphor mixture, 1½ ounces. Mix. This draught to be taken at bed-time, and to be repeated in three or four hours, if not asleep or if in pain.

In the treatment of sympathetic buboes accompanying gonorrhea, little will be required to be done, as they depend on the amount of inflammation in the urethra, and will increase and diminish in size according as the original disease becomes better or worse; however, as they sometimes enlarge very much and become very painful, it may be found necessary to apply leeches once or twice a week. The patient should rest as much as possible, and pledgets of linen wetted in Goulard water should be constantly applied. The bowels should be kept freely open. If

they should not yield to this treatment, but should proceed to suppuration, poultices should be constantly applied until matter is formed, when it may be evacuated by the lancet.

In cases of retention of urine following gonorrhea, the patient should be placed in a warm bath, and a large dose of laudanum administered. If this treatment does not succeed in relieving the bladder, the catheter should be introduced.

Gout.—This is a disease of the blood, arising from a superabundance of acid therein; the pains generally attack the small joints, arising without any apparent external cause, but is preceded generally by an unusual affection of the stomach, infecting the articulations of the feet and hands, particularly the great toe, and the less inclined to shift, yet alternating with affections of the stomach or other internal parts.

Treatment.—The patient ought to be kept quiet and easy; the diet should be nourishing, without being stimulating,—broths, puddings, jellies, light meats, &c., are therefore proper; but spirits or wine must be carefully avoided, as well as salt meats and all high-seasoned food. The patient should retire to rest early. Take on the first day half an ounce of castor oil; on the second day one drachm of tincture of hops in two ounces of the infusion of cascarilla, morning and night. The following has been found very useful: Rhubarb, guaicum gum, nitrate of potass, flowers of sulphur, of each one ounce; molasses, one pound. Mix well together; take from one to two teaspoonfuls (according to its aperient effects) every night, with a little warm gin and water. As a preventive, the following is highly recommended: Infusion of gentian one and a half ounces; bicarbonate of potash, fifteen grains; tincture of rhubarb, one drachm. Mix; to be taken at bedtime.

Gravel.—A disease depending on the formation of stony matter in the kidney.

Treatment.—The general treatment should consist in a hot bath and warm fomentations; a dose of castor-oil should be administered, and when the bowels have acted, if there be much pain, the following may be given: Solution of acetate of morphine, one dram; spirit of hydrochloric ether, two drams; syrup of roses, half an ounce; camphor mixture, four ounces. One-fourth part to be taken at bed-time. Linseed tea or barley water should be drank freely. The following may also be used with good results: Infusion of buchu, seven ounces; tincture of musk seeds, one ounce; sal volatile, two drams. Mix; dose, two tablespoonfuls once or twice a day. Or this: Essential oil of spruce, one scruple; spirit of nitric ether, one ounce; mix; dose

a teaspoonful two or three times a day, in a teaspoonful of the decoction of marshmallow root. Or the following may be used: Rectified oil of turpentine, sweet spirit of nitre, oil of juniper, balsam of sulphur, of each half an ounce; mix; dose, fifteen or sixteen drops in a wineglassful of water three times a day. Or this: Alicant soap, eight ounces; fresh lime, finely powdered, one ounce; oil of tartar, one dram; mix with sufficient quantity of water for a mass, and divide it into five-grain pills, from three to four of which should be taken daily. The following remedy has been highly recommended for this complaint: Parsley Blakestone (of the herbalist), ten cents worth, stewed down in a pint of water to half a pint; when cool, add a wineglassful of gin. Take a wineglassful of the mixture every morning, until relief is afforded.

Gray Hairs.—The sedentary, the studious, the debilitated and the sickly, are, with very few exceptions, those who are earliest visited with gray hair, Persons whose employment renders much sitting necessary, and little or no exercise possible, are most likely to carry gray hairs.

Treatment.—Mix thoroughly a small quantity of sub-nitrate of bismuth with any common pomatum, and brush a small quantity of it into the hair daily.

Gum-Boil.—This sometimes arises from exposure to cold, but is caused in the majority of cases by the irritation of a decayed tooth,

Treatment.—Inflammation of the gum generally goes on to suppuration, to promote which, warm fomentations and poultices may be applied externally. As soon as the matter is formed the abscess may be cut or lanced. Afterwards the mouth should be washed occasionally with an astringent lotion composed of tincture of galls and water, or of twenty or twenty-five grains of sulphate of zinc, dissolved in half a pint of rose-water.

Weakness of the Hair.—The falling off of the hair is generally a sign of debility of constitution.

Treatment.—The removal of the bodily weakness, and the general bracing up of the system, is the first step to take. Frequent cutting, and frequent brushing and washing, are the next methods. In addition to this, there may be applied, every morning and evening, a portion of the following lotion: Eau-de-Cologne, 2 ounces; Tincture of Cantharides, 2 drachms; Oil of Rosemary, 10 drops; Oil of Lavender, 10 drops. Mix. We append a number of the most approved remedies for weakness of the hair. Each should have a fair trial, till the right one is found: Clean the hair with rum every night on a soft brush;

then comb it very gently, and pour cold water on the head every morning, after which thoroughly dry it. A drop or two of sweet-oil twice a week should also be used. Or the following: Beef Marrow, 6 ounces; Nervine Balsam; 2 ounces; Peruvian Balsam, 2 ounces; Oil of Almonds 1½ ounces; Extract of Cantharides, 16 grains. Melt the marrow and nervine balsam with the oil; strain, add the balsam of Peru, and lastly the extract dissolved in a drachm of rectified spirit. Rub on the scalp once or twice a day for some weeks. If any soreness be produced, it should be less frequently applied. Or the following: Fresh Lemon-juice, 1 drachm; Extract of Bark, 2 drachms; Marrow, 2 ounces; Tincture of Cantharides, 1 drachm; Oil of Lemon 20 drops; Oil of Bergamot, 10 drops. Mix. First wash the head with soap and water, with a little eau-de-cologne; then rub it dry. Next morning rub it with a small lump of pomade, and repeat it daily. In four or five weeks a cure will be effected. Or the following: Burnt Alum, ½ drachm; Biborate of Soda, ½ drachm; Beef-marrow, 1 ounce; Essence of Bergamot, 6 drops. Mix. To be rubbed on the head night and morning. Or the following: Oil of Mace ½ ounce; Olive-Oil, 2 drachms; Water of Ammonia ½ drachm; Spirit of Rosemary 1 ounce; Rose-water, 2½ ounces. Mix. Or tho following: Bay leaves, 2 ounces; Cloves, ¼ ounce; Spirit of Lavender, 4 ounces; Spirit of Thyme, 4 ounces. Digest for six days, filter, and add ether half an ounce. To be applied every morning.

Hay-Asthma.—Hay-asthma, hay-fever, and summer bronchitis, is a disease which occurs about the time of the hay harvest, and appears to be caused by the pollen of some wild plants getting into and inflaming the bronchial passages. This theory is supported by the fact that those who live in situations where there is little or no vegetation do not suffer from it.

Symptoms.—A difficulty of breathing, and a burning sensation in the throat, are the chief characteristics of this affection.

Treatment.—Removal to a different locality is most effectual. The following is a valuable remedy:—Citrate of iron, 1 drachm; sulphate of quinine, 1 scruple; extract of nux vomica, 8 grains. Mix, and make into thirty-two pills. Dose, one pill three times a day.

Headache.—There is no more common complaint than this, which is symptomatic of so many diseases, that it is impossible to lay down any general system of treatment. We will, therefore proceed to enumerate some of the chief kinds of headache, with their symptoms and remedies.

Bilious or Sick Headache is perhaps the most common of

any. It generally comes on the first thing in the morning, and may often be relieved by a hot cup of strong tea or coffee; probably because this stimulates the digestive organs, from a defective action of which the pain proceeds. This pain commences usually at one side of the head, most likely on the brow, just over the right or left eye, but when it continues it is diffused over the whole head, and is accompanied by an intolerable feeling of sickness, often by vomiting, and extreme languor and depression of spirits; there is generally, also singing in the ears, dimness of sight, and confusion of mind, with great restlessness. Sometimes, without any medicine being taken, the bowels, which have been previously constipated, will be freely evacuated, and the most urgent symptoms are quickly relieved; but it is generally desirable to take some active aperient, preceding or accompanying it with the following:—Pulverized rhubarb, 12 grains; carbonate of magnesia, 10 grains; aromatic spirits of ammonia, ½ drachm; syrup of ginger, 1 drachm; spearmint water, 10 drachms.

This will generally prove effectual, especially if the diet is spare and simple. Take no solid food for twenty-four hours, only a cup or two of tea, or a little thin gruel, and the chances are that there will be no headache next day; although it will probably return as severe as ever in a few weeks, its recurrence in some cases being at almost regular periods. It can generally be traced to some error in diet, such as taking food that is indigestible, or in too large quantities; or stimulating drinks, with insufficient exercise. Very often it arises from some derangement of the biliary secretions, either as to quantity or quality, or defective assimilation; sometimes from the habitual abuse of purgatives, which enfeebles the tone of the alimentary canal. Very commonly a simple dose of rhubarb and magnesia, with about thirty drops of sal volatile, will remove a common sick headache; but when there is nausea, and vomiting or purging does not come spontaneously to remove it, the former should be excited by an emetic, composed of one grain of tartarized antimony and twenty of ipecac; and after this has acted, give blue-pill, one scruple; compound rhubarb pills, two scruples. Mix; divide into twelve pills; take one or two at a dose. Persons subject to this kind of headache should carefully abstain from fat meats, pastry, butter, and rich food generally.

That which we have just been describing is one of the forms of Sympathetic or Dyspeptic Headache, sympathy with a disordered stomach being the immediate cause. Sometimes an excess of alkali, at others of acid, in the alimentary canal, will

produce this: in the former case, a vegetable acid, such as vinegar, will afford relief; in the latter case, in which there is likely to be heartburn and acid eructations, a dose of sal volatile, or of carbonate of soda or potash, will be the best remedy. In all these cases, it seems likely that the blood circulating in the brain is both mechanically and chemically affected by the defective action of the assimilative and secretive organs of the stomach. We sometimes find that the postponement of the customary evacuation of the bowels, for ever so short a time, will cause a sympathetic headache, and that this will be relieved directly the evacuation has taken place,—a clear proof of the intimate connection there is between the head and stomach.

Congestive Headaches.—So called, because they proceed from a congested state of the vessels of the brain, arising either from an over-fullness of blood or a weakness of the organ, or from an excessive nervous irritability, which frequently upsets the balance of the circulation. Whichever of these may be the case, there is nearly always a dull pain over the whole of the head, which is worst at the fore and hind parts. When it arises from an over-loaded condition of the vessels, there is usually a bloated countenance, with full red eyes, and a dull, inanimate expression; here we find, on inquiry, a sluggish liver, and inflammation of the brain, tending to apoplexy or paralysis.

Leeches to the temples, or cupping on the back of the neck; cold applications to the head, with spare diet and active aperients, will be the proper treatment. A very effectual remedy for removing pain is two or three grains of oxalate of cerium, dry on the tongue; repeat a number of times.

A weak brain is generally a consequence of some long-standing discharge which has debilitated the whole system; and, in this condition of things, if from any cause there is more than common flow of blood to the brain, there will be headache, with a pale, sallow countenance, and a languid pulse; frequently swelled feet, excessive fatigue on the slightest exertion, with palpitation of the heart, and increase of the pain in the head. Here measures of depletion would be improper; we must soothe and sustain by means of sedatives and tonics, such as hemlock and quinine, either in the form of pills or mixture, as follows:—extract of hemlock, 24 grains; sulphate of quinine, 12 grains. Make into twelve pills, and give one three times a day; or, sulphate of quinine, 12 grains; sulphuric acid, diluted, 12 minims; tincture of hemlock, 2 drams; infusion of gentian, 6 ounces.

Take a tablespoonful three times a day. Good nourishing food will be required in this case; and stimulants, such as ale

and wine, in moderation. Where the headache proceeds from nervous irritability, the mode of treatment must also be soothing and strengthening; but in this case we must avoid stimulants as much as possible; tonics are best here with plenty of fresh air and exercise, and all that tends to invigorate the frame. A course of hydropathic treatment will generally be found effectual.

Rheumatic Headache is commonly caused by exposure to cold, especially a draught of air; the pain is chiefly confined to the back and front of the head, and is felt most at night, when the patient is warm in bed; it is a remittent, shifting pain, shooting from point to point, following the downward course of the jaw, whose muscles are commonly implicated.

Treatment.—Use light diet and abstain from animal food; give attention to the clothing; keep the body and feet warm and dry. When the pain is great, use hot fomentations or mustard plaster on the back of the neck, and give a gentle purgative at night. The following liniment is found very beneficial:—soap liniment, 2½ ounces; liquor ammonia, ½ dram; laudanum, ½ ounce. Mix, and apply to the part.

Periodic Headache, brow-ache, brow-ague, or neuralgia of the head, as it is variously called, is an intermitting pain, which comes on at periods more or less regular, and is confined to the brow. It will nearly always yield to full doses of quinine, especially if combined with hemlock.

Organic Headache, resulting from actual disease of the head itself, is rare, and when it does occur, only a palliative mode of treatment can be adopted. Sedatives, such as opium and hemlock, may, for a time, relieve the almost intolerable anguish, but they will not touch the disease itself.

Citric acid, or lemon juice, is often of great service in easing pain. Put a teaspoonful or two in a glass of cold water, and drink it. Lemonade has cured many cases of sick headache, as has also a tablespoonful of finely powdered charcoal, or of citrate of magnesia. Mix in a little cold water, or milk.

Diseases of the Heart.—The heart, from the important part which it plays in the animal economy, is subject to various, serious and often fatal diseases. Like the other viscera, it is removed from the eye, so that but little knowledge of its condition can be obtained by inspection; and hence we must have recourse to other means. The ear is the principal means of obtaining a knowledge of the state of the heart, and by auscultation and percussion we are enabled to detect the existence of various diseases. The heart gives out two sounds, known as the first and second,

which are distinguished from each other. The first sound is longer than the second, and the interval between the first and second sounds is shorter than that between the second and first. They have been compared to the two syllables *lupp, dupp*. Any manifest alteration in these sounds is indicative of the existence of disease. They may be high or low, clear or dull, muffled, rough, intermittent, &c. Murmurs or regurgitant sounds may arise from disease of the valves. The power of distinguishing between the normal and abnormal sounds of the heart, and of the causes producing the latter, can only be obtained by lengthened experience. Diseases of the heart are usually divided into two classes: first, functional or nervous; and second, structural or organic. Chief among the former are palpitations, syncope or fainting, and angina pectoris. They are chiefly to be met with in persons of a naturally nervous temperament, more especially women suffering from hysteria, or other like complaints, and may be induced by great mental excitement. In such cases great attention should be paid to the general health, and, by means of tonics, sea-bathing, and gentle open-air exercise, the system is to be strengthened. Violent exertion, and strong mental excitement, are particularly to be avoided. Among the principal organic diseases to which the heart is subject are pericarditis, carditis, endocarditis, atrophy, hypertrophy, dilation and valvular diseases.

Treatment.—In all cases of heart disease, the body and mind should be kept as easy and cheerful as possible. The diet should be well regulated,—nourishing but not stimulating. Coffee, tea, liquors, and tobacco must be dispensed with. The feet should be constantly dry and warm, and occasionally rubbed with mustard.

For inflammatory diseases of the heart, the bowels, if costive, may be moved with compound tincture of jalap. To each dose add ten grains of cream of tartar. Keep up a perspiration till the pain is relieved, by giving a teaspoonful of compound tincture of Virginia snake-root; also a warm infusion of pleurisy-root. Mustard-plasters over the chest and spinal column are also to be employed. If the patient is troubled with sleeplessness, give eight to ten grains of compound powder of ipecac and opium.

For palpitation, the tincture of digitalis, ten or fifteen drops three or four times a day, has been found useful. When the nervous system is affected, give small quantities of wine or spirits, or a few drops of laudanum or ether.

For neuralgia, or breast-pang, give a teaspoonful of a mix-

ture of equal parts of laudanum, ether, and oil of castor. The powder of Indian hemp-root may also be taken in doses of a small teaspoonful two or three times a day. If the stomach is acid, a teaspoonful of soda in half a tumbler of water will correct it.

Heartburn. What is commonly called heartburn is not a disease of the heart, but an uneasy sensation of heat or acrimony about the pit of the stomach, accompanied sometimes by a rising in the throat like water.

Causes.—Debility of the stomach; the food, instead of being properly digested and turned into chyle, runs into fermentation, producing acetic acid; sometimes the gastric juice itself turns acid, and causes it; at other times, it arises from bilious humors in the stomach.

Treatment.—Take:—One teaspoonful of the spirit of nitrous ether, in a glass of water or a cup of tea. Or:—A large teaspoonful of magnesia, in a cup of tea, or a glass of mint-water.

Hiccough, or Hiccup.—This is a convulsive catch of the respiratory muscles, causing spasmodic contraction of the diaphragm, with a partial closure of the larynx. Generally, it is but trivial and transient, causing no permanent inconvenience; but, sometimes when it occurs in the latter stages of acute disease, it is very alarming, indicating a giving way of the nervous system. Young females of an hysterical tendency sometimes suffer from obstinate hiccup.

Causes.—Long fasting, or the sudden introduction of some strong stimulant into the stomach, will often cause a common hiccup.

Treatment.—Cold water, continually sipped and swallowed, will often prove a remedy; but nothing is so likely to remove it as strong excitement of the mind. Most antispasmodic medicines are likely to be of service, and we have used the following with good effect:—Carbonate of soda, 1 dram; sulphuric ether, 3 drams; tincture of ginger, 2 drams; tincture of gentian, 4 drams; camphor mixture, 8 ounces. Take two tablespoonfuls every two or three hours. Sometimes hot applications to the upper part of the chest and throat will relieve the symptoms.

Hip-Joint Disease.—This generally occurs in children of a scrofulous habit. It prevails in cold moist climates, and attacks chiefly children between the ages of seven and fourteen, though it is not unfrequently met with both before and after that time of life.

Symptoms.—The first symptom complained of is generally pain in the knee. Sooner or later, the patient is observed to

walk awkwardly and less vigorously than usual, caused by the affected limb being elongated and emaciated. Pain is felt in the hip-joint itself, and though aggravated by motion, often becomes more severe from time to time, without any such cause of irritation. Collections of matter make their appearance, most frequently in the outer wall of the hip, but occasionally in the groin and hip. The patient, after a tedious illness, becomes hectic and dies, or recovers with a stiff joint, and wasted useless limb,

Treatment.—As this disease is generally pretty far advanced before it is discovered, but little can be done for it in the way of domestic treatment. A surgeon should be consulted. As a general rule, counter-irritants in the first stages, such as blisters and setons, with a leech or two, if the swelling and inflammation accompanied with pain, is great. Afterwards the same treatment as that prescribed under the head *Abscesses.*

Hoarseness.—A disease of the air-passages.

Causes.—From colds, or breathing a damp or dusty atmosphere, or through exhaustion from protracted speaking, singing, &c

Treatment.—Put into a teapot one part of pyroligneous acid to six parts of boiling water; introduce the spout of the teapot into the mouth, and inhale the vapor. Or, mix one teaspoonful of sweet spirit of nitre in a wineglassful of water. Take this two or three times a day.

Hydrophobia (*Rabies*).—This is the well-known canine or dog madness, whose chief symptoms are spasmodic contractions of the larynx, preventing the patient, although thirsty, from swallowing any kind of liquid,—one of the most dreadful and fatal visitations that can affect humanity.

It has been said that hydrophobia has resulted from the mere scratch of a cat; if so, the probability is that the creature's talons had become imbued with the venom when the paw was put to the mouth, as it frequently would be if that part felt hot or uneasy. The knowledge that the saliva of a human being affected with this disease is infectious, should teach us, while ministering to such an unhappy fellow-creature, and relieving his sufferings by all means in our power, to do so with due caution; the more especially as such patients are sometimes extremely violent, and prone to bite as a dog would.

Treatment.—As no positive cure has been discovered for this terrible disease, all efforts must be merely preventive. Directly the bite has taken place, a free excision of the wound should be made, taking care that every part of flesh that the

saliva has touched be removed; then thoroughly wash the wound with tepid water, keeping up this application for a considerable time. Some recommend stimulating dressings to the part, but the advisability of this is very questionable; better to let the wound heal than to keep the system in a state of irritation. If there is any doubt about the poison being all removed, a strong solution of lunar caustic should be applied, or the caustic itself; this is as likely to be as effective as the actual cautery, which some recommend. Youatt says he never saw the lunar caustic fail, and it may be used at any time before the disease manifests itself, although the longer it is delayed the less chance is there of success.

The alleviating measures to be resorted to when the disease has manifested itself, are—the application of ice to the spine and fauces; the inhalation of chloroform, and prussic acid dropped on the tongue a drop or two at the time; injecting into the bowels three or four ounces of starch jelly, with two or three grains of morphine; and rubbing in about every four hours a dram of mercurial ointment, with two grains of powdered opium.

When, as is often the case, the patient is violent, he should be restrained by a straight waistcoat, or some such contrivance, from injuring himself and others. Cold affusion is a remedy always at hand, and one that has produced beneficial results; get some water at as low a temperature as possible, and pour it from a considerable height over the back of the head and along the upper part of the spine. This greatly reduces the action of the heart, and it is necessary to watch the pulse carefully during the process, and stop it as soon as it sinks in a dangerous degree. Sedatives and refrigerants must be mainly employed in these cases, as the patient is suffering under a violent excitement consequent on the introduction of a poison into the system, which excitement, if not subdued, will inevitably and quickly exhaust the vital powers.

Does it follow, then, that all persons bitten by a rabid dog or other animal, must die? Is there no hope for them? Assuredly we would not promulgate such a doctrine as this. In the first place, a very small proportion of those who are so bitten have the disease at all; and this partial immunity has sufficed to establish a false reputation for many of the nostrums vaunted as infallible remedies. It has been calculated that the proportion of persons bitten who suffer is about one in twenty-five.

Hypochondria.—A disease characterized by extreme sensibility of the nervous system, leading the patient to believe

himself to be suffering from some terrible and imaginary disease, or to be much worse than he really is. The ideas of such persons often partake of the most extravagant character. He may fancy that he is immensely tall, or inordinately small; that he is heavy as lead, or light as a feather; that he is composed of glass, or is a lump of butter. They are all extremely timid, and their fears are exercised upon trifles, or are altogether groundless. They dwell constantly upon their own sufferings, and are usually morose, peevish, suspicious, and misanthropic; and frequently suspect their nearest and dearest friends of designs upon their life. There is frequently, also, functional derangement of certain organs, especially of those connected with the nutritive processes.

Causes.—The causes of this disease are various, arising, as it does usually, from an impaired condition of the nervous system. Habitual costiveness, excessive venereal indulgence, and masturbation, are also prolific sources of this disease. Young men of studious habits are very apt to suffer from this disease. Those too, who, from want of occupation and a due amount of exercise, acquire a luxurious habit often fall a prey to it.

Treatment.—The cure must of necessity vary somewhat, according to the nature of the disease. In general, the great thing is to withdraw the patient's mind as much as possible from himself. For this purpose, cheerful society and change of scene should be adopted. The system ought to be strengthened by tonics, and exercise in the open air. If it arises from idleness and luxury, the great cure is plenty of active exercise and a spare diet. In all cases the state of the digestive organs should be attended to, and the bowels kept in a strictly normal condition. If there is costiveness, cracked wheat should be eaten, or if this does not answer, give the following:—Pulverized rhubarb, 2 scruples; bicarbonate of potassa, 1 scruple; extract of nux vomica, 5 grains. Mix. Make into twenty pills. Dose, one pill twice a day. A teaspoonful of calcined magnesia, or an infusion of thoroughwort, drank cold, will often answer an excellent purpose.

Imperfect Sight (*Amaurosis*).—Loss of sight, proceeding from a paralysis of the optic nerve, which may be caused by disease of the nerve itself, or of that part of the brain with which it comes in contact.

Symptoms.—Amaurosis generally comes on very gradually, with dimness of vision, and variations of color, or floating objects, called *spectra*. One symptom is dilation of the pupil and insensibility to light. This disease may be permanent or temporary,

as it depends upon causes, which are remedial or otherwise. It sometimes is occasioned by an excess of bile in the system, or a disordered stomach; and, in that case, resort would be first had to aperients and mercurials, such as a five-grain blue-pill at night, and a senna, or as it is commonly called, a black draught, in the morning; to be followed up by small doses of calomel and rhubarb, or colocynth, according as the bowels are sluggish or otherwise. If the patient is strong, and of a full habit, he should keep to low diet, and avoid malt liquor or spirits. Should the symptoms not yield to this treatment, blisters should be applied behind the ears, or a seton opened in the back of the neck or temple, as the fair presumption is that the mischief lies in the brain or the nerve itself.

Treatment.—Cold bathing is very useful; and this, in connection with out-door exercise and a strictly vegetable diet and abstinence from exciting pursuits, will usually effect a cure if a cure is possible.

Incontinency of Urine.—This is rather a troublesome than a dangerous complaint, and young children and aged persons are most liable thereto.

Causes.—Most generally from a relaxation of the governing sphincter muscle of the bladder, from weakness or paralytic affection, but sometimes it is caused by some irritating substance in the bladder; in children, some say, from sleeping on their backs.

Treatment.—Dash cold water on the loins and genitals; and use the following:—Stimulant tonic drops: tincture of steel, six drams; tincture of cantharides, two drams; tincture of henbane, one dram; mix, take thirty drops, three times a day, in water. Or the following may be used with good effect: Sulphate of zinc, one dram; powdered rhubarb, one dram; Venice turpentine, two drams; mix, divide into sixty pills, take one three times a day, and therewith a wineglassful of the decoction of leaves of bear's whortle, or bilberry.

Inflammation of the Pericardium (*Pericarditis*).

Causes.—It may be induced by exposure to damp or cold, or by other causes, which give rise to inflammation in other parts. It frequently arises from acute rheumatism, or from Bright's disease.

Symptoms.—It is characterized by great tenderness over the region of the heart, amounting, when pressed, to sharp cutting pains, which prevent the patient from lying upon the left side. If, as is usually the case, the pleura is involved, there will be acute pain on coughing or drawing a deep breath. Sometimes

the attack is not so severe, and only a slight pain is felt, or only a sense of heaviness and oppression. Generally the action of the heart is increased, sometimes so much so as to constitute palpitation. Frequently there is a considerable quantity of fluid effused into the cavity of the pericardium, which is sometimes externally visible by the bulging out over that part.

Treatment.—Its mode of treatment depends very much upon the particular circumstances of each case. Where the disease is rapid and violent, bleeding may be of great service; but this course is not so much relied on or practised now as formerly. The bicarbonate of potash, in half-dram doses every two or three hours, is recommended, together with opium, to relieve the pain and restlessness. Poppy fomentations, or flaxseed-meal poultices, applied to the part, serve to relieve the pain, and the vapor-bath will usually be found beneficial. The diet should at first be light and nourishing; but, if the patient is very weak, stimulants will be necessary, and afterwards the system should be strengthened by tonics.

Inflammation of the heart (*Carditis*) itself sometimes occurs, but it is usually accompanied with inflammation of the pericardium. The symptoms in both cases are the same, and the treatment will, consequently, be similar in both. The like remarks will also apply, in a great measure, to inflammation of the interior lining membrane of the heart, (*Endocarditis*) is usually accompanied by one or both of the above. In this case there is more or less of fever and anxiety, and a pe r sound of the heart is heard upon auscultation.

Inflammation of the Liver.—This disease is known by a painful tension of the right side under the ribs, attended with some degree of fever, a sense of weight or fullness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish color of the skin and eyes.

Treatment.—Take care to avoid stimulating food and drinks; partake freely of barley-water or linseed-tea. Keep the body and mind easy and quiet as much as possible. Let the bowels be gently opened; a decoction of tamarinds, with a little honey or manna, will answer this purpose very well. Foment the side affected by means of flannels wrung out in hot water. If the pain be very violent, apply a blister. Take three or four times a day in the beverage ordinarily drank a teaspoonful of the spirit of nitric ether. When there is an inclination to perspire, let it be promoted by copious draughts of warm diluting liquors. If the disorder, in spite of all endeavors, should continue obstinate, the greatest attention must be paid to the diet,

avoiding fish, flesh, and salted and seasoned foods. The patient should live for the most part on vegetables and fruits, and drink whey, barley-water, or buttermilk. Gentle exercise must also be taken.

Inflammation of the Spleen is often the result of chills and fever, and is very difficult and stubborn to cure.

Symptoms.—A feeling of tightness and pain in the left side—the pain being increased on pressure, or by lying upon the left side. Sometimes the organ enlarges, so as to be felt by the hand. There is sometimes numbness, weakness of the legs, palpitation of the heart, difficulty of breathing, inability to exercise much, obstinate constipation, vomiting of food, piles, dry skin, tongue coated white or red, low spirits, and occasionally dropsical affections.

Treatment.—Treatment should be about the same as in inflammation of the liver. After the active inflammation is subdued, the warm bath may be used once or twice a week. In the chronic form of the disease, counter-irritation with the compound tar-plaster, with mustard poultices, croton oil, or tincture of iodine, will be particularly needed. Keep the bowels open, and, if the patient is pale and bloodless, give iron as a tonic.

Inflammation of the Stomach—(*Gastritis*).—It is known by pain in the epigastric region, increased when anything is taken into the stomach, together with vomiting and hiccough; the pulse small and hard; and general prostration of strength, attended by fever and anxiety. It is produced by poisons of various kinds taken into the stomach, as arsenic or corrosive sublimate; by food of an improper nature; by draughts of any cold liquid when the body is much heated.

Treatment.—A clyster, of about forty drops of laudanum in a pint of thin gruel. Hot bran poultices, sprinkled with laudanum, may be applied to the seat of pain.

The following is a good solvent mixture where gall stones are known to be present: Castile soap, two drams—melt by heat in half a pint of water; add spirits of turpentine and ether, of each two drams; take a tablespoonful three times a day.

Inflammation of the Kidneys.—The existence of this disease may be known by a sense of heat and sharp pains about the loins, and a dull, benumbed feeling down the thigh.

Treatment.—Avoid everything of a heating or stimulating nature, and let the diet consist chiefly of light, thin broth, mild vegetables, etc.; drink plentifully of balm tea, sweetened with honey, decoction of marshmallow roots, with barley licorice, etc. Nothing so safely and certainly abates the inflammation

as copious dilution. Should there be much pain in the back, heat should be applied to the part; and this is done by means of cloths dipped in hot water, rewarmed as they grow cool. Another good plan is to fill bladders with a decoction of madders and camomile flowers, to which is added a little saffron, and mixed with about a third part of new milk. Should there be shivering and signs of fever, with considerable tenderness over the kidneys, and no medical advice at hand, a few leeches may be applied. After some time the bowels should be freely opened, and the best means of effecting this is with three grains of calomel, and two hours afterward half an ounce of castor-oil; subsequently the following may be given: Carbonate of soda, two drams; spirit of nitric ether, tincture of henbane, of each two drams; syrup of tolu, mixture of acacia, of each one ounce; camphor mixture to eight ounces; mix, and take half a wineglassful every four hours. A very good remedy is the following: Take of tincture of opium, liquor of ammonia, spirit of turpentine, and soap liniment, of each equal portions; mix, and rub well into the parts affected. In conjunction with this external application, take of infusion of buchu, eleven drams; powdered tragacanth, five grains; tincture of buchu, one dram; mix for a draught, and take every morning. If there be much nausea, a clyster should be administered, consisting of a dram of laudanum, with half a teacupful of thin starch; this to be injected every two or three hours, or at longer intervals, according to the effect produced. Employ the warm bath, and afterwards warm fomentations to the stomach and loins; drink freely of linseed tea. Take also of sulphate of magnesia one ounce; solution of carbonate of magnesia, one ounce; tincture of henbane, and tincture of ginger, of each two drams; sulphuric ether, half a dram; water, four ounces; mix, and give three tablespoonfuls every six hours. Those who have once suffered from inflammation of the kidneys are very liable to it again; to prevent a recurrence of the attack, they should abstain from wine and stimulants; use moderate exercise; avoid exposure to wet and cold; eat of food light and easy of digestion; not lie too much on the back, and on a mattrass in preference to a bed.

Inflammation of the Bladder. Causes.—It is seldom a primary disease, but is in consequence of inflammation in the neighboring parts; it is, however, sometimes caused by retention of the urine, and consequently over-distension of the bladder, or by a large stone in the bladder.

Symptoms.—Acute pain and tension of the part, frequent desire to make water, but difficulty in passing it, or a complete

retention of it; and tenesmus, and frequent desire to go to stool to no purpose.

Treatment.—The diet must be light and thin; the drinks in all bladder diseases must be linseed tea, barley water, solution of gum arabic, marsh mallow tea, and the like; bleeding by leeches, if very bad, and this anodyne clyster: Linseed tea and new milk, each half a pint; laudanum, forty drops; mix, and inject; this foments the internal parts. The bowels may be kept open by this mild aperient draught; Tartrate of potash, three drams; tincture of senna, one dram; manna, half an ounce; warm water, one and a half ounces; mix and take at once.

Inflammation of the Peritoneum. Peritonitis is an exceedingly painful and dangerous disease, from its extent and connection with important organs. It may exist either as an acute or chronic disease.

Causes.—Its causes are various, as cold, mechanical injuries of the peritoneum, the development of tumors, etc. Women in childbed are peculiarly liable to it. After the disease has continued for a certain time, it is attended with tension and swelling of the belly, and if not checked it usually terminates in from five to ten days.

Symptoms.—There is usually great pain and tenderness of the abdomen, accompanied with fever, and a frequent, small, hard pulse. Sometimes, at first, the pain is confined to one spot; but it generally soon extends over the whole of the abdomen. It is very severe, and much increased by any motion, even coughing, sneezing, or drawing a long breath. Even the weight of the bedclothes is sometimes unbearable. It is acute and cutting, and sometimes occurs in paroxysms; and the patient usually lies on his back with his knees drawn up. The bowels are usually constipated, but sometimes the reverse; and commonly there are present nausea, vomiting, and hiccough.

Treatment.—The treatment consists in the application of warm fomentations to the abdomen, together with blister or leeches, if necessary. General bleeding is sometimes recommended, but this can only be adopted or of service when the patient is strong and of full habit. As internal remedies, most reliance is usually placed upon mercury and opium. After a time, peritonitis sometimes assumes a chronic form. Here the symptoms are less marked. The pain is slight, or only discoverable on pressure, and the fever low; but the skin is hot and dry, the tongue foul, and appetite impaired. The treatment is local bleedings, with blisters and other counter irritants applied over the abdomen. A nourishing but unstimulating

diet, and attention to the state of the bowels, are likewise necessary; and some recommend iodine, either taken internally or applied as ointment to the part.

Inflammation of the Eye (*Ophthalmia*) SYMPTOMS.—Its chief symptoms are a smarting sensation, and a feeling like that caused by the presence of dust. There is also considerable stiffness, and the whites become tinged with red, owing to the veins being suffused. On a close examination, the red vessels may be distinctly traced; and it may be observed that they move with the surface, showing that the inflammation is but superficial.

Treatment.—Warm bathing of the eye, combined with brisk purgatives, should first be tried; mercury may be taken in a mild form, as in the grey powder, and combined with rhubarb, say three grains of the former and eight or ten of the latter, every other night; the diet should be low, and light excluded as much as possible from the inflamed organ. Should the warm bathing not produce a good effect, in a couple of days or so, use the following lotion: Wine of opium, 1 dram; sulphate of zinc, 8 grains; acetate of lead, 16 grains; rose or plain distilled water, 8 ounces. Dip a piece of linen in this lotion, and bind it, not too tightly, over the eye, letting part of the fold hang down so as to cover it well. Keep this moistened. Should it be necessary to resort to other measures, drop into the eye, from a quill, or a small glass tube, a solution of nitrate of silver, the strength about four grains to the ounce of distilled water, two or three drops three times a day, and apply leeches.

When this disease continues long, the inflammation extends deeper, and it becomes chronic, which has all the symptoms of the acute form of disease, except the feeling as of dust in the eyes. The latter of the above measures will generally reduce it, or, should not the nitrate of silver drops succeed, use wine of opium alone in the same way and a lotion made with green tea and about onesixth of its bulk of brandy, or other strong spirit. If, in spite of these remedies, the veins of the lids begin to swell on the outside, showing that the inflammation is spreading, blisters should be applied behind the ears, and the system yet more reduced if it safely can. In this case there is a plan of treatment, which generally succeeds in giving relief and it is really not so dangerous and formidable as it may seem.

Let the lid of the affected eye be carefully closed; damp the outside with a sponge; then draw a stick of lunar caustic (nitrate of silver) gently and evenly across the moist surface in

successive lines, taking care not to go over the same part twice. Suffer the application to dry without opening the lid, which in a few hours will begin to swell, and soon attain such a size as to cause total blindness. This may continue perhaps for a day or two, the cauterized surface during the time discharging a large quantity of serum. The swelling will then gradually subside, and, in a few days more, with the help of a dressing of simple ointment the skin will have resumed its ordinary appearance, and all symptoms of inflammation will probably be gone.

Inflammation of the Larynx (*Laryngitis*) is, more particularly, inflammation of the mucous membrane that covers the laryngeal cartilages, including the epiglottis.

Symptoms.—This disease is characterized by a high degree of fever; the pulse is frequent and hard, and the patient manifests a considerable degree of restlessness and anxiety; he likewise complains of sore throat; and among the earliest symptoms that bespeak danger is difficulty of swallowing, for which no adequate cause is visible in the fauces; and to this is presently added difficulty of breathing. The act of inspiration is protracted with wheezing, and the patient points to the Adam's apple as the seat of the disease. He speaks either hoarsely, or what is more common, all power of audible voice in the larynx is lost, and he speaks only by means of his lips and tongue, in a whisper. As the disorder advances, the patient's general distress increases. His countenance, from being flushed, becomes pale or livid; his looks anxious and ghastly; he struggles for breath, and if he does not obtain timely relief, dies of strangulation. Its course is generally rapid, terminating fatally within the fifth day, and even, in some cases, within twelve hours.

Treatment.—In the treatment of this disease, active remedies require to be promptly had recourse to. If a blister is applied, it should be on the upper part of the sternum or chest, rather than on the front of the throat. Purgatives should also be administered, and warm fomentations applied to the throat. As the danger of this disease lies in its tendency to produce suffocation, wherever there is danger of this termination, tracheotomy should be had recourse to, and an artificial opening made, through which the operation of breathing may be carried on, till the parts of the larynx acquire their natural state. Nor should this operation be too long delayed.

Inflammation of the Tonsils (*Tonsilitis*). With enlarged tonsils, there is always, more or less, thickness of speech, and a great liability to sore throat or quinsy. Tonics and as-

tringent gargles are required for such enlargement, and a long perseverance in the latter is necessary. The glands should be now and then brushed over with a solution of nitrate of silver, or rubbed with the stick itself; but this should be done very carefully, so as not to touch the surrounding parts. Should the enlargement become prominent, it is best to have the tonsils cut by a surgeon; this is not a dangerous nor very painful operation. In ulcerated sore throats, the tonsils generally become impaired, and are very painful and even dangerous.

Inflammation of the Edge of the Eyelids.—The edges of the eyelids are sometimes very red and stiff in consequence of the inflammation of the small follicles or ducts which open there.

Treatment.—The best remedy is a little red precipitate ointment rubbed into the roots of the lashes, when the lids are closed on retiring to rest. This may be repeated every night until no longer required. A little grey powder, combined with rhubarb, should be given, and the patient kept quiet and somewhat low. When inflammation has been going on in the eyelids for a time, their insides, when inverted, will often present a rough granular appearance. In this case, they should be gently rubbed over with a smooth piece of dry sulphate of copper. The lid should be kept open after the application until the eyeball is syringed with warm water, to remove from it any of the solution caused by the flow of tears acting on the sulphate. There will probably be great smarting of the eye, and increased redness of the white portion, which must be suffered to subside before the application is repeated, which it will, most likely, have to be many times. Sometimes the hairs on the lids grow inwards and cause great irritation of the balls. Collodion brushed over the lids will, as it dries, cause contraction of the skin, and so draw the hairs outward, but this is only a temporary relief, and the application must be frequently repeated. Surgical aid must be sought for the case.

Inflammation of the Ear (*Otitis*).—This is characterized by an acute and increasing pain, with tenderness on pressure or moving the jaw, accompanied with fever. Sometimes the external ear is the seat of the disease, sometimes the internal, or both may be involved. There is frequently impaired or confused hearing, and often the pain is so acute as to produce delirium. On examination, the meatus is observed to be more or less red, swollen, tender, and dry. After a time, if the disease progresses, suppuration takes place, and pus is discharged. If this happens in the inner ear, frequently the tympanum ulcerates

and bursts, so as to afford exit to the collected matter. An obstinate discharge may remain after the other symptoms have disappeared.

Causes.—It is usually caused by cold, or exposure to currents of cold air, injudicious bathing, violent syringing, or probing, or otherwise causing irritation of the ear.

Treatment.—It is to be treated with fomentations and poultices, and the repeated application of leeches. At the same time, active purgatives are to be administered. The ear should also be frequently syringed with warm water.

Inflammation of the Iris (*Iritis*).—This is characterized by intolerance of light, but not the spasmodic closing of the eyelids before mentioned. The whole colored part of the eye loses its clearness, and sometimes has on it white or yellow spots; a pink zone invests the cornea, and seems to give a tinge to the whole front of the ball. This is a very rapid and violent form of eye disease.

Treatment.—Keep the bowels open with some gentle aperient. Place in the eye one drop of solution of atropia, one grain to an ounce of water, three times a day. Wash the eyes with an infusion of slippery elm bark, or marsh mallow.

Inflammation of the Tongue (*Glossitis*).

Causes.—Mechanical injury, exposure to cold, the use of mercury, &c.

Symptoms.—The tongue becomes greatly swollen, and is painful to the touch; respiration and deglutition are much interfered with; and one of the chief dangers of the attack is suffocation.

Treatment.—In mild cases, ice and the use of purgatives will afford relief; but, in the more severe forms, leeches will have to be applied to the part, or the knife may have to be used, and pretty deep incisions to be made into the inflamed part, which will afford almost instantaneous relief.

Inflamed and Ulcerated Nose.—When the lining membrane of the nose is inflamed and ulcerated, a solution of carbonate of soda in warm water thrown up by a syringe will be of service. If the purulent discharge be offensive, a few drops of the solution of chloride of soda or lime should be added to this.

Inflammatory Blush (*Erythema*), a morbid redness of the skin, and considered as a milder form of erysipelas—from which, however, it differs in not being contagious, and yielding more easily to medical treatment. Medical men enumerate seven different species of this disease, all differing in some pe-

culiarity of form or color in the eruption. Thus sometimes the surfaces are smooth and shining and marginated, or they are like small pimples or tumors, appearing generally on the face, breast, or arms; again they appear as red shining patches on the the front of the legs, and sometimes on the arms, assuming a purplish tint after some days, like a bruise. This form appears to be almost peculiar to young women. Then there is the *red gum* or *tooth rash* of children, and the redness occasioned by irritating discharges, such as of the feces in diarhœa or of tears when of an acrid character, or the chafing between the folds of the skin of children, which results from want of proper care in frequent washing and drying the parts. Sometimes after dancing or any violent exercise, drinking cold water when in a heated state, or eating too largely of fruit or other substances, red spots and patches will appear on the back, shoulders, and face, more particularly of young persons; and all these are different varieties of erythema, one of whose peculiar characteristics is that the redness disappears on pressure of the inflamed part, but shows itself again in a second or two after the finger is removed.

Treatment.—The proper treatment for children is bathing the part affected freely with hot water, and then drying thoroughly, aud applying powdered starch or violet powder; keep the bowels open with a senna draught, or a dose of castor-oil in the morning, following it up with small doses of quinine, according to the age of the child. Should the inflammation not yield to this treatment, after a few days, use the sugar of lead lotions recommended for erysipelas, and still proceed with the quinine, to which rapidly-spreading erysipelas scarcely ever fails to yield. This course of treatment must be applied in most of the common forms of the disease to patients of all ages; but there are one or two exceptional forms to which it is not applicable such as the kind already alluded to as chiefly attacking young women, and of these such as are of a delicate constitution. It is especially likely to come on after scarlet fever or measles. As this is attendant on a debilitated state of the system, it requires nourishing food and strengthening medicine. For its removal some preparation of iron, with infusion of quassia, and an aromatic tincture, or cinnamon water, will make a good mixture; or take the following, sulphate of quinine, 12 grains; diluted sulphuric acid, 1 dram; compound tincture of cardamums, ½ an ounce; infusion of roses, 12 ounces.

Dose—Two tablespoonfuls two or three times a day; change of air is also desirable.

Another not uncommon form of the disease generally shows itself on the face, especially of sedentary females. It is often called erysipelas, but it is usually unattended with febrile symptoms, or constitutional derangement of any kind, and exhibits no tendency to spread rapidly. Local remedies are of little service in this case—indeed, they are more likely to do mischief, by inducing congestion. When the disease is acute, a brisk mercurial aperient, followed by cooling saline medicines, may be of service; when it becomes chronic, arsenic is the only remedy likely to cure it, and this will not always effect the object. It should be taken in the form of Fowler's solution. Plenty of walking exercise, with due care as to diet, and strict attention to the laws of health, are the grand specifics after all.

Itch (*Scabies*).—A troublesome contagious eruptive disease, found generally in those of uncleanly habits.

Cause.—It is caused by a minute insect lodging under the skin, and is readily communicated by contact. The only proof of the existence of itch is the presence of the insect, and this is readily detected by means of the microscope.

Treatment.—The itch is never got rid of without medical treatment; but to that it will always yield, provided proper cleanliness be observed. Sulphur is the grand specific for it; it may be applied in the form of ointment, prepared as follows: Flowers of sulphur, 2 ounces; carbonate of potash, 2 drams; lard, 4 ounces. To be rubbed well in, wherever the eruption appears, every night and morning—washing it off with soap and flannel before each fresh application. The most effectual plan is to anoint the whole body, from the nape of the neck to the soles of the feet, and out to the ends of the fingers; put on socks, drawers, flannel wrapper, and gloves, and so remain in bed for thirty-six hours, repeating the anointing operation twice during that time; then take a warm bath, and wash the whole person with soap and flannel.

In mild cases, a sulphureous vapor bath taken twice in twenty-four hours, with warm soap and water washing, will generally be sufficient.

Irritation, Itching (*Prurigo*).—A papulous affection of the skin, attended with troublesome itching. Sometimes it is attended with a sensation as of ants or other insects creeping over and stinging the skin, or of hot needles piercing it. This disease, although not dangerous, is a cause of great discomfort, and sometimes even misery; it attacks persons of all ages, and is not easily got rid of, sometimes lasting for months, and even years.

Treatment.—Wash well, every evening before going to bed, with Castile soap, and allow it to dry in. Brandy or alcohol may be used in the same manner. An ounce of lemon juice in a pint of water, or vinegar used in the same proportion, will be found useful; also, water and spirits of camphor. The diet should be carefully regulated, and all stimulants avoided.

Influenza.—The true disease seldom occurs, except as an epidemic, attacking many persons at once. It comes on quite suddenly.

Symptoms.—Its symptoms are those of a general fever. There is great prostration of strength, generally showing loss of appetite, heat and thirst, cough and difficulty of breathing, owing to the air valves and bronchial passages being clogged with mucus; there is also running at the nose and eyes, weight across the brow with throbbing pain, and great depression of spirits. The febrile symptoms do not commonly last more than four or five days, sometimes but one or two, but the cough generally remains for a considerable time, varying according to circumstances, such as exposure to cold or wet, predisposition to cough, &c.

Treatment.—With the strong and healthy this is not a dangerous disease, but aged or weakly persons are frequently carried off by it. In the former case but little medical treatment is required. Keep the patient in bed, and let the temperature of the room be warm and equable; open the bowels with a gentle aperient, such as rhubarb and magnesia, or senna mixture, and follow this up with weak wine-whey, or some warm diluent drink, in a pint of which a grain of tartar emetic and a dram of nitrate of potash has been dissolved; give a wineglassful of this about every four hours. It is not generally safe to practice much depletion; but where there is great difficulty of breathing, and irritation of the throat, a few leeches may be applied just above the breast bone, in the hollow of the neck. Stimulating liniments may also be applied to the chest, and mustard poultices, but blisters are scarcely to be recommended. Hot fomentations may also be useful, and medicated inhalations, such as a scruple of powdered hemlock or henbane, sprinkled in the boiling water, from which the steam ascends into the throat. The fresh leaves of the above plants may be used, or a dram of the tincture, if these cannot be procured. When the fever is subdued, if there is still cough and restlessness, a five-grain Dover's powder may be given at bedtime, or one-eighth of a grain of acetate of morphine, with a five-grain squill pill, for the cough if required. If there is great feebleness, tonics must

be administered; infusion of calumba, cascarilla, or gentian, with carbonate of ammonia; one ounce of the former with five grains of the latter, three times a day, with a mildly nutritious diet,—broths, arrowroot, sago, and a small quantity of wine. Such is an outline of the course to be pursued in most cases of influenza which really require medical treatment at all; generally warmth, rest, and good nursing, will do all the business. Should the cough be very obstinate, and resist all efforts to remove it, change of air will generally prove effectual, and this is beneficial in most cases.

Insanity.—This is one of the most terrible disorders to which the human race is subject.

Causes.—The causes which may lead to insanity, particularly in those whose mental constitution is weak, are very numerous. In many cases, the tendency to insanity is hereditary, and transmitted from parents to children. One of the most fertile causes of insanity is drunkenness. Excessive study, strong mental excitement, grief, jealousy, disappointment, frequently also lead to it. Religious excitement is also not an unfrequent cause.

It is usual to distinguish insanity into different kinds, as,—1. *Moral Insanity*, in which there is a morbid perversion of the feelings, affections, and active powers, without any illusion or erroneous conviction impressed upon the understanding. 2. *Intellectual Insanity*, affecting the reasoning powers, and which may be either general or partial, the latter as in monomania. 3. *Mania*, or raving madness, in which the mental faculties are notoriously impaired, the patient gives way to all sorts of extravagances, and, if not prevented, will do mischief to himself or others. 4. *Dementia*, imbecility, fatuity, when the mental powers become gradually impaired, the sensibilities diminished, and the person at length becomes careless, or dead, to all that is going on around him.

Usually, however, two or more of these kinds occur together. Moral insanity frequently manifests itself in a desire to steal, or appropriate the property of others. In monomania the patient reasons correctly upon all matters except one, which forms the subject of his insanity. Imbecility usually commences with loss of memory and the power of concentrating the attention, for any time, upon one subject; then all control is lost over the thoughts, and the mind wanders meaninglessly from one subject to another; at length there is a carelessness to all that is going on around, and life may become a mere existence, the mental faculties being entirely lost. Idiotcy differs from

imbecility in being congenital, while the latter is acquired, or produced by disease. Idiotcy may be produced by various causes connected with the parents; as intermarriages of near relatives, intemperance, scrofulous habits, some powerful influence acting on the mother during pregancy. Idiots present every degree of mental imbecility, down to the lowest shade, without sense sufficient to satisfy the mere wants of nature. The head of the idiot is usually very small, particularly in the regions of the forehead; in some cases, however, it may be quite natural, and in others large and misshapen. The beneficial effects of attention to the physical health, and of education, are manifested even in the case of idiots.

Treatment.—The chances of recovery depend greatly on the complication, or otherwise, of insanity with other diseases, particularly epilepsy or paralysis, with either of which it is nearly hopeless. It is also influenced by the form of the disease, the period of its duration, the age, sex, and constitution of the patient. The mean duration of cases terminating favorably is from five to ten months; after the latter period recovery is very doubtful. In advanced life, insanity is generally permanent, and imbecility is very rarely curable. While insanity may arise from some affection of the brain which speedily terminates in death; yet, in general, it is not necessarily a fatal disorder, for lunatics have been known to live thirty, forty or fifty years, after being seized with their disease. When the malady proceeds from, or is accompanied by, physical derangement, as it usually is, it is necessary to ascertain the nature of this, and to take means for its removal. If there be excitement and inflammatory action, mild antiphlogistic measures will be necessary, together with aperients and a low diet. If, on the contrary, there is debility and prostration of strength, a nourishing diet will be required. When, as is often the case, want of sleep is an attendant symptom, opiates are to be given. In all cases, exercise, fresh air, and cleanliness are required. The moral treatment of the insane consists in diverting their thoughts by occupations and amusements, and in gaining their confidence by kind and conciliatory measures.

Intoxication.—Intoxication is the state produced by the excessive use of alcoholic liquids or inebriating substances.

Treatment.—Administer a teaspoonful of spirits of hartshorn in a wineglassful of water, or give a wineglassful of camphor mixture. When a person is found insensible from the effects of intoxication, he should be conveyed into a cool room and placed between blankets, with his head considerably raised,

but the legs should hang down, and the feet be bathed in warm water. The clothes should be loosened, and barley-water or rice-water be given freely, though in small portions. Next, a gentle emetic is to be introduced, and the throat stimulated with a feather dipped in oil. After this the patient will probably fall into a sound sleep, and awaken some hours afterwards, partially if not wholly recovered. When the pulse and the breathing continue, and the body is hot, cloths dipped in cold water and applied to the head, neck, stomach, and breast, will frequently be of great service in restoring intoxicated persons to life and sensibility.

Irritation of the Spine is especially common in females, and often lies at the root of palpitations and the hysterical affections to which they are subject. In this case a tender spot, or more than one, may generally be found on examination somewhere in the course of the spinal cord. Simple pressure on one of these spots will sometimes suffice to bring on an attack of hysteria and fainting. Debility of constitution is likely to be the cause of this; therefore tonics and invigorating measures are called for. Iron and quinine should be taken, and general and local bathing resorted to, with friction down the spine with a coarse towel or flesh-brush; in some cases a small blister over the tender part is advisable.

Irritation of the Bladder.—In ordinary cases this may be relieved by warm fomentations applied to the affected part, or by warm bathing. It is also well to avoid undue exertion, to rest in a recumbent position as much as possible, to keep the bowels well open, and to abstain from eating and drinking such things as are of a heating and stimulating nature. When the complaint assumes a more severe form, medical advice should be sought without delay.

Jaundice.—A disease arising from obstruction to the passage of the bile into the intestines, from disorders of the liver.

Treatment.—The diet should be cool, light, and diluting—consisting chiefly of ripe fruit and mild vegetables; the drink, barley water or linseed tea, sweetened with licorice; the bowels must be kept gently open. When the disease has abated, constant doses of Peruvian bark should be given, with good port wine; plenty of exercise taken, and a mustard poultice occasionally placed over the liver. The following has been of great benefit: Remain in a warm bath, of one hundred degrees, for twenty minutes. Take, every other night, five grains of blue pill, and five grains of compound aloe pill on those nights

when the blue pill is not ordered. In addition, take twenty drops of elixir of vitriol, in a wineglassful of infusion of gentian, twice a day. Or take either of these: Castile soap, 1 ounce; oil of juniper, 30 drops. Mix well together, and divide the mass into ninety-six pills, two be taken twice a day. Hard soap, 4 drams; compound powder of cinnamon, 1 dram; rhubarb, 2 drams; oil of juniper, 16 drops; syrup of ginger, sufficient. Form the whole into one hundred pills, of which three are to be taken morning and evening.

Eclectic, or Herbal Treatment for Jaundice.—As the stomach is usually disordered, it is well to give an emetic, and after it has acted freely administer a gentle purge. Should there be coldness about the feet or body, use the hot bath, or bathe the whole body with hot vinegar and water. A decoction made of dandelion and barberry root may be drank freely. If these do not give immediate relief, take the following: Golden seal and capsicum, of each 1 dram; bitter root and white poplar bark, of each 2 drams; cover with boiling water. When cool, add half a pint of Holland gin. Dose: a wineglass three times a day. A strong tea of peach-tree leaves, about half a pint taken daily; or from ten to forty drops of the tincture of blood root, taken three times a day, either in water or herb tea, have been highly recommended.

Leprosy.—Leprosy is an eruption on various parts of the body of raised circular patches covered with white scales of the outer skin. These patches are surrounded by a reddish ring. The patches themselves are generally of a ring-like form, the centre being apparently healthy skin. The patches begin in the form of small smooth spots, and often enlarge considerably. When the scales are rolled off, they leave a dull red surface, on which the scales are speedily reproduced. Leprosy commonly commences at the knee, thigh, elbow, or forearm, and will, if not checked, often extend over the whole body.

Treatment.—Take of Fowler's arsenical solution five drops, in a wineglassful of water three times a day. The dose to be gradually increased to eight or ten drops. Rub into the spots every night an ointment formed of native orpiment, three grains; lard, 1 dram. Or, take of compound tincture of bark, ½ an ounce; solution of potash, 1 dram; peppermint-water, 6 ounces; take two tablespoonfuls three times a day. Also, apply externally, every morning and night, the following lotion: Borax, 2 drams; honey, 2 ounces; water, 6 ounces. Mix.

Lice.—These disgusting vermin most commonly appear when cleanliness is neglected, and especially in cases where the

body-clothing and bed-clothing are used continuously without change. But there appear to be certain habits of body, and certain seasons of the year, which are favorable to the generation of this kind of vermin,—as, for instance, spring and autumn, and also during the prevalence of east winds.

Treatment.—Wash the body well with vinegar and water, and afterwards rub in a lotion made as follows: Camphor, grated, ½ an ounce; best white-wine vinegar, 1 pint; water, 1 pint. Mix, and apply night and morning. Or, take equal parts of garlic and mustard, moisten with vinegar, and rub into the skin twice a day. For lice in the head, pound parsley-seed to a fine powder, and rub it well into the roots of the hair. Persons who are liable to this visitation should, at the spring and fall of the year, take every morning, for a fortnight or three weeks, a teaspoonful of flowers of sulphur in a little warm milk. This serves to purify the blood, and correct the tissues.

Lumbago.—Lumbago is a rheumatic affection of the muscles of the loins. When the pain attacks the hip-joint it is termed *sciatica*. It is indicated by stiffness and pain, and the pain is aggravated by stooping, sitting, or rising to the upright posture. It is most generally caused by exposure to wet or cold.

Treatment.—Nothing affords greater relief than hot moist applications to the back, continued from twelve to twenty-four hours at a time, and followed by the rubbing well into the back and loins of soap liniment, combined with one-sixth part of turpentine. Take also at bedtime ten grains of Dover's powder, with two grains of calomel; and, on the following morning, half an ounce of castor-oil. Take also twice a day ten grains of carbonate of potass, with one teaspoonful of sweet nitre in a wineglassful of water. Should the pain be urgent, one of the best and most efficacious remedies for its relief is the compound powder of ipecacuanha and camphor, three or four grains of each of which made into two pills, may be taken occasionally. This will not interfere with the effects of any other medicine.

In very severe and obstinate cases of lumbago a cure can only be effected by mechanical means, This is effected by an instrument termed the "Thermal hammer." As this instrument can be used by any non-professional person, and may be made by any blacksmith, we will give a description of it. Into an ordinary wooden handle there is inserted an iron rod about four and a half inches long, slightly bent at the end, and terminating with a disc, or round face, half an inch in diameter and a quarter of an inch thick. When this instrument is used, it is grasped

so that the forefinger may rest upon the bend near the disc. The disc itself is then to be introduced into the flame of a spirit-lamp, or of a piece of burning paper, and held until the metal beneath the forefinger becomes uncomfortably hot; the handle is then to be grasped, and the disc applied lightly and momentarily, and at short intervals, to the skin, over the part affected. Each touch of the disc produces a shining mark on the skin, and very shortly the whole surface becomes reddened and slightly inflamed. The application of this instrument is on the principle known in medical practice as "counter-irritation," and heat thus being applied to heat, the excited action going on within the body is counteracted or withdrawn.

Low Spirits.—This is a state of mind generally associated with dyspepsia, in which all kind of imaginary evils are conjured up, and the slightest pain or unusual feeling is looked upon as the precursor of some dreadful malady. Persons so affected always fancy themselves on the verge of danger, and are fearful and irresolute in everything.

Causes.—The causes are various. It may arise from intense study, some great stroke of affliction, indolence and inactivity, or excessive indulgence in venereal or other excesses, or deranged digestion.

Treatment.—Change of scene, cheerful society, engaging the mind in some art or pursuit, which, although not too laborious, requires the use of the mental powers; exercise, tepid and shower baths, are among the remedial measures in this case. The bodily health must be carefully watched and preserved.

Lockjaw (*Tetanus*).—This is a spasmodic seizure of a dreadful and generally fatal character. By this disease, not only are the muscles of the jaws, but those also of the whole body, thrown more or less into spasm, often so violent as to break the teeth or bones.

Causes.—The cause of tetanus is frequent exposure to cold and damp, or it may be some local injury, such as a cut, puncture, or laceration. It more commonly results from either of these in warm climates, although intense cold alone has not unfrequently produced it. It often affects a large number of the wounded on a field of battle, who are exposed to the vicissitudes of the weather. Lockjaw, which is produced by a wound, will sometimes show itself in four days; sometimes not for two or three weeks after the wound has been received.

Treatment.—The common treatment for it is the warm bath, or, if this cannot be had, enveloping the whole body in a blanket wrung out of hot water; the administration of enemas, consist-

ing of thin gruel, with an ounce each of castor-oil and turpentine. If the patient can swallow, give large doses of opium in the liquid form, say from thirty to sixty drops of laudanum every half hour, until it manifestly affects the system. Cold water, poured on the head from a considerable height, may also be of service; and friction with a stimulant liniment, such as turpentine and opodeldock, down the course of the spine. Inhaling ether or chloroform is also very beneficial.

Loose Teeth.—The teeth may become loosened by external violence, or by the improper use of instruments when extracting diseased teeth in the neighborhood of sound ones.

Treatment.—Press them as firmly as possible into their sockets, and keep them so with ligatures of catgut, Indian weed or waxed silk, the patient for the time being living on spoon food. When teeth become loose owing to an accumulation of tartar, no good can be effected until this is removed, and it ought to be done early, otherwise it will have no effect. Looseness of the teeth is frequently occasioned by a sponginess of the gums. To remedy this, scarify the gums deeply, and allow them to bleed freely, repeating the operation till the teeth become partially fastened. Afterwards wash the mouth frequently with water strongly impregnated with tincture of bark, and employ the teeth sparingly until the loosened teeth become perfectly firm again. Or the following mixture:—Borax, alum, bay salt, of each one dram; spirit of camphor, tincture of myrrh, of each one ounce; spirit of horseradish, four ounces; tincture of rhatany, two ounces. Mix, and shake occasionally for a day or two, then filter. Rinse the mouth occasionally with a teaspoonful in a wineglassful of water.

Masturbation (*Self-Pollution, Onanism*). This destructive vice is indulged in to a frightful extent by the youth of both sexes. Often the habit is indulged in without its victim having the slightest knowledge of its destructiveness, and only when nature is so outraged that the system refuses to perform its offices, does the victim become conscious of the evil. A grave responsibility rests upon parents toward their children in these matters. Every child, male or female, should be carefully watched, until it is old enough to understand the subject, and then it should be carefully explained to it. The earlier this is done, and the stronger the impression made upon the mind of the child of the wickedness of this abuse, the better. It is truly a matter of life and death, and squeamishness is as much out of place as if the child were really dying.

The habit of self-pollution in boys leads to that of involun-

tary seminal emissions, in itself a disease, and a continued cause of nervous exhaustion and final impotence. In girls the same habit causes leuchorrea, or mucus discharges from the vagina, falling of womb, irregular and painful menstruation, a loss of all pleasure in the sexual relation, difficult and painful childbirth, and a whole train of nervous and hysterical affections, which make the lives of women a curse to themselves and to all around them.

It is supposed by many that the mischief of this practice is from the loss of semen. The loss of this secretion is certainly exhausting; but this is far from being the greatest source of evil. Boys secrete no semen before puberty, and girls never secrete any. The real source of mischief is in the nervous orgasm—that vivid, ecstatic, and, in its natural exercise, most delightful of all sensuous enjoyments. The orgasm is almost a spasm. When prematurely excited, though then imperfect, it gives a shock to the whole system; and when often repeated, the nervous power is completely exhausted. All the vitality of the body goes to supply the immature and too-early exhausted amative organs in the brain and body. The cerebrum is robbed, and the child loses sense and memory; the digestive system is robbed and we have dyspepsia and decay, with a terrific train of nervous and organic diseases.

Treatment.—The habit must be abandoned at once; unless this be done no treatment will be of any avail. The moral character must be strengthened. The motives of hope, manhood, virtue, and religion must be placed before the patient. All things of a sensational character must be avoided, the company of the good and virtuous cultivated, and the mind kept engaged in s me elevating study or useful employment. Avoid all stimulants—wine, coffee, liquors, novels, love pictures, balls, theatres, and sleeping on the back. Use a hard bed, light and not too nutritious food. Take whey, acidulous drinks, fruits, and a veg table diet. Take a bath morning and evening, and exercise till quite fatigued. Avoid all aromatic articles, fish, eggs, jelly, game, salad, mushrooms, cantharides, aloes, and all stimulants, except camphor. If there is irritation in the cerebellum, by heaviness or heat, cut the hair very short, wear no cap, use a hard pillow, ice applications on the nape, with hot foot bath, dry or narcotic friction on each side of the vertebral column, also cold liquid applications.

In extreme cases, where the habit has overcome the reason of the patient, he should not be left alone day or night. Let him go to bed only when much fatigued, and rise the moment

he awakes. Let the bed be hard and cool, with light covering. Attend to the evacuating of the bowels and bladder. Dashing cold water on the genitals, with the free use of the vagina syringe for females, will assist much in restoring the tone of the organs.

Milk Sickness.—A disease chiefly confined to the West, where the cattle roam about at large in woods or over prairies. The plant the eating of which causes the milk to be poisonous is not known.

Symptoms.—Sickness at the stomach, weakness and trembling of the legs. There is vomiting, and a peculiarly offensive breath. These symptoms continue for weeks, and are often all that are shown in this complaint; but in some severer cases there are chills and flashes of heat, great oppression about the heart, anxiety, deep breathing, heat in the stomach, violent retching and vomiting, alarming beatings of the heart, and throbbing of the large vessels, and cold extremities. In most cases, the vomiting returns every hour or two, attended by a great burning at the pit of the stomach, the substance thrown up having a peculiar bluish-green color, and a sour smell. As soon as this discharge takes place, the patient falls back upon the pillow, and lies easy till another turn comes round. The tongue is covered with a whitish coat, and the bowels are obstinately costive. The pulse is small and quick.

Treatment.—The treatment cannot vary much from that pursued for inflammation of the stomach, though the neutralizing extract often suffices to allay the nausea and burning sensation. Some anti-bilious physic to move the bowels should be given.

Neutralizing Extract.—Take two pounds of the best rhubarb, one pound each of cinnamon and golden seal. Grind or bruise the articles, and mix them; macerate them for two days in a gallon of the best fourth-proof brandy. Then express the tincture with strong pressure, and add to it one fluid dram of oil of peppermint, previously dissolved in a little alcohol. Take the residue remaining after the pressure, and placing it in a sieve or percolator, gradually run warm water through it until its strength is exhausted. Evaporate this infusion to four pints, and while the liquor is still hot, dissolve in it two pounds of bicarbonate of potassa and three pounds of refined sugar. Continue the evaporation, if necessary, until, when added to the first tincture, it will make a gallon and a half; then mix the two solutions. Dose: one fluid dram. Good for dysentery and cholera morbus.

Mumps (*Parotitis*).—This disease, which is a contagious epidemic, consists of inflammation of the salivary or parotid glands, which are situated on each side of the lower jaw.

Symptoms.—It commences with slight febrile symptoms of a general character. Very soon there is redness and swelling at the angle of the jaw, which gradually extends to the face and neck near to the glands. These sometimes become so large as to hang down a considerable distance, like two bags.

Treatment.—But little medical treatment is required for this disease when at its height. The patient, from sheer inability to move the jaw, must live chiefly on slops; and it is well for him to be kept low, unless very delicate, in which case a little good broth or beef tea, should be given. If there is much pain, the throat should have hot fomentations applied; and, in very severe cases, two or three leeches. Mumps is not a dangerous disorder, unless the inflammation should be turned inwards, in which case it will probably affect the brain or testicles; or, in the female, the breasts. Should the swellings suddenly disappear, and thereby aggravate the symptoms of fever, the following liniment must be applied:—Camphorated spirits, 1 ounce: solution of sub-carbonate of ammonia, 2 drams; tincture of cantharides, ½ dram. Mix, and rub in until the swellings re-appear. Take also, internally, nitrate of potass, one dram; tartarised antimony, one and a half grain. Mix, and divide into six powders, one of which is to be taken every four hours.

Nausea.—A sensation of sickness, with an inclination to vomit. Although the feeling of nausea itself is referred to the stomach, and may be due to causes connected with that organ simply, it also frequently originates in disorder in other and distant parts of the body.

Treatment.—Clear the stomach by an emetic of ipecacuanha, and afterward the bowels by two or three grains of calomel at night, followed by a black draught in the morning; also take hydrocyanic acid, in doses of from one to three drops, with five grains of bicarbonate of soda, every two, three, or four hours, in a glass of water. If the foregoing should fail, two or three leeches may be applied to the pit of the stomach, and one grain of calomel, with three grains of chalk or magnesia, laid on the tongue in powder, and swallowed gradually every four or six hours. So long as the stomach is in a state of irritation, only small quantities of food should be introduced into it at one time, as a spoonful of milk or beef tea every hour. A teaspoonful of magnesia in a glass of sherry, or lemon juice in small quantities, taken from time to time, have proved beneficial.

Neuralgia.—A painful affection of the nerves. When it occurs in those of the face, it is termed face-ague or tic-doloreux; when it affects the great nerve of the leg, it is called sciatica. Other parts, such as the fingers, the chest, the abdomen, &c., are also liable to this agonizing pain,—one of the most severe and wearing to which the human frame is liable.

Causes.—The exact nature of it is not very clear; that is to say, the origin of the disease, for although its immediate seat is a nerve, or set of nerves, yet there must be some originating cause. It can frequently be traced to some decay, or diseased growth of the bone about those parts through which the nerves pass; and, in some severe cases, it has been found to depend upon the irritation caused by foreign bodies acting upon those highly sensitive organs.

Among its exciting causes we may mention exposure to damp and cold, especially if combined with malaria; and to these influences a person with a debilitated constitution will be more subject than another. Anxiety of mind will sometimes bring it on, and so will a disordered state of the stomach; more particularly, a state in which there is too much acid. Tea, coffee, tobacco, and opium are prolific causes of neuralgia, as well as other diseased conditions of the nerves. They should be discontinued, and immediate benefit will ensue.

Symptoms.—A violent, darting, and plunging pain, which comes on in paroxysms. Except in very severe and protracted cases, there is no outward redness nor swelling to mark the seat of the pain, neither is there usually constitutional derangement, other than that which may be caused by want of rest, and the extreme agony of the suffering while it lasts, which may be from one to two or three hours, or even more, but it is not commonly so long. Tenderness and swelling of the part sometimes occurs, where there has been a frequent recurrence and long continuance of the pain, which leaves the patient, in most cases, as suddenly as it comes on. Its periodic returns and remissions, and absence of inflammatory symptoms, are distinctive marks of the disease.

Treatment.—This must depend upon the cause. If it is a decayed tooth, which, by its exposure of the nerve to the action of the atmosphere, sets up this pain, it should be at once removed, as there will be little peace for the patient until it is. If coexistent with neuralgia there is a disordered stomach, suspicion should at once point thereto, and efforts should be made to correct the disorder there. If the patient is living in a moist, low situation, he should at once be removed to a higher level, and

a dry gravelly soil. Tonics, such as quinine and iron, should be given, and a tolerably generous diet, but without excess of any kind. In facial neuralgia, blisters behind the ears or at the back of the neck, have been found serviceable; and, if the course of the nerve which appears to be the seat of mischief, can be traced, a belladonna plaster, or a piece of rag soaked in laudanum and laid along it, will sometimes give relief; so will hot fomentations of poppies and camomiles, or bran poultices sprinkled with turpentine. In very severe cases, one quarter of a grain of morphine may be given to deaden the nervous sensibility, and induce sleep, which the patient is often deprived of at night, the pain coming on as soon as he gets warm in bed.

An application of chloroform on lint has sometimes proved very effectual in relieving severe neuralgic pains, and so has an ointment composed of lard and veratrea, in the proportion of six grains to one of lard.

A mixture of chloroform and aconite has been recommended for facial neuralgia, the form of preparation being two parts of spirits of wine, or eau de cologne, one of chloroform, and one of tincture of aconite, to be applied to the gums of the side affected, by means of a finger covered with a piece of lint, or soft linen, and rubbed along them,—the danger of dropping any into the mouth being thus avoided. When the pain is connected with some organic disease, as a decayed tooth, or chronic inflammation of the gums, or of the sockets, or superficial necrosis of the bone, substitute tincture of iodine for the spirit in the above formula.

We would caution our readers strongly against the careless inhalation of chloroform, as a remedy for neuralgia, which appears to be growing into a general practice. Several deaths have resulted from it, the practice being to pour a little on a pocket-handkerchief, without much regard to quantity, and hold it to the mouth until the required insensibility is produced. This remedy should never be administered except under the supervision of the medical adviser.

The shower-bath, plenty of exercise in the open air, and attention to whatever will build up the general health, must be carefully attended to.

Persons at all liable to this painful affection should be extremely careful not to expose themselves to wet or cold; above all, not to sit in draughts. A very slight cause will often bring it on, where there is the least tendency to it.

One severe and troublesome form of neuralgia is ear-ache.

It often occurs in children at the time of dentition. It may be distinguished from that of an inflammatory character, resulting from the formation of an abscess, by the symptoms above described.

Neuralgia of the Heart (*Angina Pectoris*).—A disease which is commonly connected with ossification, or other morbid affections of the heart.

Symptoms.—It is characterized by a sudden and most violent pain across the chest, which extends down the arms, and seems to threaten immediate dissolution. It sometimes comes on during rest, but most usually after violent exertion. The paroxysm does not commonly last long, but it has been known to continue for an hour or more.

Treatment.—An anodyne combined with ammonia has sometimes been found very effectual in relieving the spasm. The following is a good formula: Fetid spirits of ammonia, ½ ounce; solution of morphine, 3 drams; camphor mixture, 6 ounces. Take a tablespoonful every half hour until relieved. If the paroxysm is very violent, a little hot brandy and water may also be taken; or a teaspoonful of sal volatile or ether in water, and repeated at intervals. If the pain continue, frictions and mustard plasters applied to the chest, soles of the feet, and calves of the legs. Where there is extreme faintness, the horizontal posture should be adopted. Persons subject to these attacks would do well to provide themselves with the following, as a medicine in case of need:—Half an ounce each of sulphuric ether, spirits of ammonia, and sal volatile; two drams of tincture of opium. Mix, and take a teaspoonful in water; and repeat at the end of an hour if relief be not afforded.

Nightmare (*Incubus*).—This is a distressing sensation experienced during sleep, and usually accompanied by frightful dreams.

Causes.—A heavy supper just before going to bed; dyspepsia, mental irritation, great fatigue, lying in an uneasy position, may occasion it, as also the use of narcotic and intoxicating substances.

Treatment.—Carefully shun all kinds of food likely to prove flatulent or of difficult digestion. Hot and heavy suppers are particularly injurious, as also are acids. Excess of sedentary employment should also be avoided. Take the following: Carbonate of soda, 10 grains; compound tincture of cardamoms, 3 drams; simple syrup, 1 dram; peppermint-water, 1 ounce. Mix, for a draught, to be taken at bedtime. Or take, on going to bed, a teaspoonful of sal-volatile in a wineglassful of cold water.

Nocturnal Emissions.—These, to which young men are sometimes especially liable, often cause more alarm than there really is any occasion for; they are involuntary discharges of the seminal fluid, and are likely to occur when the organs are excited by dreams, or imaginations of a certain character. Unless they become frequent and profuse, there is no reason for regarding them with the morbid feeling of anxiety which they commonly occasion; still such discharges should be attended to and checked as much as possible. They generally indicate a debilitated system, and are in most cases, perhaps, the result of criminal self-indulgence and venereal excesses, from which those thus affected should rigorously abstain. A course of tonic medicines should be taken; nothing is so good as the muriated tincture of iron with quinine, about one grain of the latter with ten drops of the former, in a little water three times a day. Sea bathing or the shower bath, regular but not excessive exercise, a sufficiently nourishing but not a stimulating diet, with gentle aperient medicines if required (avoiding aloes), are the proper remedial measures.

Persons affected in this way often get into a painfully nervous state, and, conscious that they are but reaping the reward of bad practices, are ashamed to state their cases to a respectable medical man, and therefore fly to advertising quacks, who promise secrecy and a rapid cure. But this is a great mistake; there can be no rapid cure for involuntary seminal discharges, except it be by such powerful medicines as will do great mischief to the system of the patient, and probably render his organic weakness permanent. In nine cases out of ten a temporary stoppage of the discharge, even, is not accomplished by the much-vaunted Balm of Syriacum, and other nostrums, so quickly as it would be by the means above recommended, or others which the legitimate practitioner might deem suitable for the peculiar case, and no after ill-effects are to be apprehended from such treatment.

Noises in the Ear.—Noises in the ear like the distant sound of bells, roaring of the sea, hissing, singing, &c., are often indicative of a determination of blood to the head. With some, mere derangement of the digestive organs will cause these noises. When accompanied by a certain degree of deafness, they are generally occasioned by an accumulation of wax in the external passage, or a partial stoppage of the Eustachian tube by cold. When the noises become chronic, or long continued, bathing the head regularly every morning with cold water will sometimes remove them. If cold be the cause, or

disordered stomach, they will pass away with the temporary ailments which occasioned them. If too great a fullness of the veins of the head, cupping, leeching or abstraction of blood by means of the lancet, with a depletive course of treatment, must be adopted.

Offensive Breath.—Fœtid breath may proceed from decayed teeth, or morbid secretions about the tonsils, or disease of the lungs. In children it generally indicates a disordered state of the stomach, which may be corrected by means of purgative medicines. Where it cannot be so remedied, it will be well for the patient to chew a little cinnamon occasionally, or take half a tumbler of camomile tea on rising in the morning. If the cause is local, the mouth should be washed with a weak solution of chloride of lime or soda.

Pains in the Side may arise from a rheumatic affection, or from derangement of the stomach. If the pains be situated high up in the region of the chest, they may be occasioned by inflammatory affection of the lungs, but in this case will be accompanied with more or less fever, and other symptoms indicative of the disorder. Pain on the right side, lower down, may be owing to an affection of the liver; on the left side, to affection of the pain on the left side. It, however, often occurs as a sympathetic affection, sometimes of the heart or lungs, in either sex. It is common in females at times of functional disorder.

Treatment.—Regulate the state of the bowels by mild aperients; and, if the system seems impoverished, and there has been much debility of the digestive organs, take twenty grains of the sequioxide of iron twice or thrice a day. Employ the warm bath frequently, and apply to the part affected a muslin bag filled with hops and well soaked in hot water; also rub in every fourth hour the following: Tincture of aconite, half an ounce; soap liniment, one and a half ounces. Mix.

Obstinate and increasing pain of the side, which will not go away with the treatment above indicated, must on no account be neglected. There is evidently something radically wrong in the system, and the advice of a medical man must be taken.

Palpitation of the Heart is an increase in the force or frequency of the heart's action. It is frequently produced by increased physical action or mental emotion, and is sometimes the result of disease. Sometimes the palpitations are loud, and clear and regular; at others, they are faint and intermittent: now a distinct throb, or several, and then a tremulous flutter, or a quick beat, like the wings of a confined bird flapping against the bars of its prison. When there is violent throbbing of the

heart, which may be felt by a hand pressed upon the chest, while the patient is himself unconscious of it, there is reason to apprehend organic disease; but when there is such acute consciousness as we have described, there is generally only functional or nervous derangement, without any structural change.

Causes.—A disordered stomach may be the cause, although there may be no other symptoms of this. We have known cases in which a very slight irregularity in the mode of living has produced palpitation of the heart, and that, too, in an otherwise healthy person. In some, almost any strong nervous stimulant will produce it, and we recollect one instance in which it always came on after a cup of tea, and was never troublesome when this beverage was not taken.

We mention this to show that palpitation is not always, nor indeed commonly, symptomatic of heart disease; and need therefore cause no unnecessary alarm although its frequent recurrence should set the patient inquiring as to what is the real cause.

Treatment.—The only treatment likely to be of service must be directed towards removing the predisposing and exciting causes, and establishing a more healthy nervous condition: gentle exercise, tonics, change of air and scene, an endeavor to occupy the mind in some useful and moral pursuit; a well-regulated and generally frugal, although sufficiently nourishing diet; and a strict avoidance of all that can excite or stimulate either mind or body. By this means palpitations not connected with organic disease, may generally be got rid of. If the patient is of a full habit, and has a tolerably strong pulse, a course of gentle purgatives may be necessary. They should not be salines, but of a cordial nature, like this: Pill of aloes and myrrh, ½ dram; compound galbanum pill, ½ dram. Divide into twelve pills, and take one at bed time. Or the following. Compound infusion of senna, 3 ounces; decoction of aloes, 3 ounces; spirits of sal volatile, 1 dram; compound tincture of cardamums, 2 drams; tartrate of potash, ½ ounce. Mix, and take two tablespoonfuls occasionally.

Palsy (*Paralysis*).—The total loss or diminution of motion, or sensation, or both, in any part. There are several kinds of palsy or paralysis, such as the *paralysis agitans*; the shaking, or as it is sometimes called, from the peculiarity of the patient's gait, the dancing palsy; *hemiplegia*, when one side of the body only is smitten; and *paraphlegia*, when it is the lower half which is more or less deprived of its nervous power; but in all cases it is the brain which is the seat of disorder; and if this is

confined to one of its hemispheres, the attack, if it does not include both sides, is most likely to fall on the opposite side of the body.

Causes.—The rupture of a vessel of the brain is one of the most common causes of paralysis, and this may occur without there being any decided apoplectic symptoms. A slight transient faintness, and confusion of ideas, may precede the attack, or it may come on during sleep, so that the patient may only be made aware that he is is paralyzed by his inability to speak plainly, or to move a limb, or one side of his body. Sometimes the attack is gradual, and occupies a considerable time,—days, weeks, and even months elapse before the loss of nervous energy becomes complete; and this helplessness may be produced by a succession of slight shocks, as it were, or by the gradual stealing on of an apparently torpid condition. This latter is more commonly the case when the disease arises from a decided state of general debility, which in time involves the brain, until the structure gives way, and softening is the consequence. Literary men, and all who have much head-work, are especially liable to that condition of the brain which causes paralysis; and so are hard drinkers, and others whose lives or habits necessitate a frequent state of cerebral excitement. With such the progress of the disease is probably rapid. If of full habit, they will, it is likely, die quickly of apoplexy; if of spare, they will sink into a state of mental and bodily imbecility. In either case they may be subject to epileptic fits.

One of the chief causes is pressure upon or disease of the brain or spinal cord. When confined to the lower part of the body, there may be reason to believe that the defect of power is in some cases but functional. In this case the cause may be long exposure of the lower limbs to wet and cold, self abuse, excessive indulgence in venery, inflammation of the bowels or kidneys, effusion in the spinal cord from a blow, a burn or other injury; disease of the womb, or of the urethra, may also give rise to it. Palsy of either of the limbs may be caused by pressure, and general palsy by the action of lead, or mercury upon the system; therefore those who work in these metals are peculiarly liable to be so affected, such as button-gilders, glass silverers, plumbers, &c. The most dangerous form of this kind is when it affects the muscles of respiration, in which case it rapidly proves fatal. The excessive use of tea or coffee will often lead to it.

Symptoms.—Among the premonitory symptoms of paralysis may be named headache, confusion of ideas, loss of memory, im-

paired vision, drowsiness, and partial stupor, with, frequently, numbness and pricking or tingling sensation in the limb or part about to be attacked. With persons of a full habit, there will be heat and flushings in the face, and most of the signs of an approaching fit of apoplexy; then follows indistinct articulation, loss of power, and the other marked and unmistakable indications of an actual attack.

Treatment.—The proper treatment, in the case of a patient of a full habit, will be bleeding and cupping in the neck, and strong purgatives,—about five grains of calomel, followed by senna mixture, or croton-oil pills, every four hours, until they operate freely. When there is faintness and confusion of intellect, give a teaspoonful of sal volatile in a glass of water, and repeat it in an hour, if required; no alcoholic stimulant should be administered; put the feet and legs in a hot mustard bath, and place the patient in a warm bed, with the head and shoulders well raised. Follow up the cupping in the neck with a blister, and after that, put in a seton, if required. After they have once acted well, keep the bowels gently open with rhubarb or castor oil: let the diet be spare, and the quietude of the patient as perfect as possible. After the acute stage of the disease has passed, local stimulants should be used, and the affected parts well rubbed with the hand or a flesh-brush. Electricity and galvanism may also be employed, where there is no reason to suspect structural disorganization. In paraplegia it is often very difficult to get the bladder to act; and when it does, the urine flows from it involuntarily. Great attention should be paid to this, and stimulant diuretics given: the tincture of cantharides, in half-dram doses, is, perhaps the best.

In some cases, much relief has been afforded by the use of sulphur baths, and chalybeate waters. Repeated moxæ along the course of the spine, and small blisters on the inside of the legs and thighs, are highly recommended.

In palsy of the face, if it is caused by a blow, a few leeches behind the ear, and at the angle of the jaw, may prove beneficial. If cold is the cause, hot fomentations and stimulating liniments should be applied; as also in palsy of the hands, fingers, or other extremities, with electro-magnetism, persevered in for a considerable time. In all cases of chronic paralysis, it should be borne in mind that the nervous system requires arousing and stimulating to a due performance of the functions necessary to life. In nearly all there is a sluggish action of the bowels, which are often obstinately constipated, and require the strongest purgatives to keep them at all open. It

is sometimes better to employ enemas, than continue giving drastic medicines. The paralytic patient frequently enjoys pretty good general health, and eats largely; and this increases the above difficulty, especially if it be a heavy person, with little power of self-movement. When confined entirely to bed, sores and sloughing ulcers are not uncommon: these should be treated as directed under the head *Bed-sores*. An air or water bed greatly obviates the danger of them.

Eclectic, or Herbal Treatment for Palsy.—If the patient be young and of full habit, bleed freely, and use a large blister on the back of the neck; but if the patient is old, a different treatment must be adopted. Give stimulants freely. Place the patient in a warm bath, and give a tablespoonful of scraped horseradish, or the same of mustard-seed, four or five times a day. Rub the whole body with flannels, impregnated with tincture of cayenne pepper, oil of sassafras, oil of turpentine, or the tincture of cantharides. Spirits of turpentine, about twenty drops in a little water, three times a day, has been found very successful.

If great sleeplessness or pain exist, give a little opium; and for a laxative, give a teaspoonful of tincture of golden seal, two or three times a day, till the bowels open. Flannel should always be worn next the skin.

Papulous Scall is a mattery pimple developed in a highly inflamed skin. The blisters are about the size of a split pea, and are surrounded by a red ring. They are generally separate, not clustered like crusted tetter. They are scattered over various parts of the body, and are followed by a hard, black crust, or by a sore. The disease is either acute or chronic. The chronic form is found in weakly children, or persons reduced by sickness or low living.

Treatment.—For the acute form, low diet, gentle laxatives, cold sponge-bath on the sound parts, and an ointment of oxide of zinc, 1 dram; spermaceti ointment, 1 ounce, mixed. For the chronic form, tonics should be given internally, and the above ointment used.

Piles.—These consist of small tumors, situated on the extremity of the great gut, called the retum. The piles are usually accompanied by a sense of weight in the back, loins, and bottom of the belly, together with pain in the head, sickness at the stomach, and flatulence in the bowels. If the tumor break, a quantity of blood is voided, and considerable relief from pain is obtained; but if they continue unbroken, the patient experiences great pain.

Treatment.—The following treatment will generally prove beneficial: Lenitive electuary, 1 ounce; flour of sulphur, 1 ounce; jalap, in powder, 1 dram; balsam of copaiba, ½ ounce; ginger, in powder, ½ dram; cream of tartar, ½ ounce; syrup of ginger, a sufficient quantity to form the whole into an electuary. Mix. Take a teaspoonful every three hours, until the bowels are freely open. At the same time make use of the following lotion: Goulard water, 6 ounces; laudanum, 1 ounce. Mix, and apply to the parts repeatedly. When the piles are very painful and swollen, but discharge nothing, the patient should sit over the steam of hot water. He may also apply a linen cloth, dipped in warm spirits of wine, to the upper part, or make use of bread and milk poultices. Either of the following may be used with advantage: Powder of oak galls, 1 ounce; elder ointment, 1 ounce. Mix, and anoint the parts night and morning. Sublimed sulphur, ½ ounce; cream of tartar, 1½ drams; lenitive electuary, 1 ounce; syrup sufficient to form an electuary. A teaspoonful to be taken at bed-time.

Pleurisy or *pleuritis*, is inflammation of the pleura, or investing membrane of the lungs.

Causes.—Among the causes of pleurisy the more common are exposure to cold, especially after violent exercise, blows on the chest, fracture of the ribs, tubercles in the lungs. It is most prevalent in winter, and, next to that, in autumn. Old persons are most subject to it, but it may occur at any period of life.

Symptoms.—It is usually distinguished as acute and chronic. The former generally commences with chills, rigors, and the ordinary symptoms of inflammatory fever, accompanied or followed by a sense of weight in the chest, which in a few hours becomes acute pain, usually referred to a point directly below the nipple. There is also generally a short dry cough, and the breathing is frequent, short and anxious,—the pain being increased by a deep inspiration or the act of coughing. Sometimes the patient can only lie upon the affected side, sometimes only upon the opposite one; but usually he prefers lying upon his back. The pulse is frequent and hard, skin hot, cheeks flushed, urine scanty and high-colored, and tongue white. These symptoms are not always so well marked, and the pain is sometimes more diffuse and less severe. In most cases the acute pain, as well as the fever, subsides on the third or fourth day, and the cough and difficulty of breathing abate, though the pleura still continue in a state of inflammation.

Treatment.—In the treatment of this disease the object is

to reduce the local inflammation and prevent effusion. Hot and moist flaxseed poultices or poppy-head fomentations should be applied to the chest, the diet should be light and unstimulating, and purgatives should be administered.

In chronic pleuritis the symptoms are usually those of the acute form in a mitigated state. It may succeed the acute, or it may come on gradually without any of the more marked features of that disease. There is usually more or less of fever, an acceleration of the pulse, emaciation, difficulty or hurry of breathing, increased by exertion, more or less of pain or soreness, and inability to lie on the healthy side. The treatment of this form of the disease differs from that of the other, the object being to promote the absorption of the effused matter, and also to support the patient's strength. For promoting the absorption of the effused fluid, as well as for preventing its further secretion, counter-irritants are used, as blisters, eruption liniments, tincture of iodine,—the last painted over the part, or exhibited internally, will be found to act very beneficially in removing the the effusion. The general health is to be improved by a nutritious but not heating or stimulating diet, and by the cautious administration of such tonics as the strength of the patient is able to bear. Change of air will be often found to act most beneficially in such cases, and is frequently efficacious when most other remedies have failed. Failing other means, recourse is sometimes had to the operation of tapping the thorax, for setting free the effused matter; but the operation is attended with considerable danger, and is rarely productive of more than a temporary relief.

Purulent Opthalmia (*Egyptian Opthalmia*).—In this, all the symptoms of the acute or chronic form are greatly aggravated. The conjunctiva is red and swollen, rising up like a wall round the cornea; the eyelids are tense, livid, and often enormously swollen; a copious secretion of muco-purulent matter is poured out, and there is a burning pain in the eye, with inability to bear the light. It requires prompt and decided treatment, as there is always great risk of permanent injury to the eye, from its tendency to produce thickening and granulation of the conjunctiva of the lids, or ulceration and sloughing. In the severer forms of the disease recourse must be had to bleeding, either general or by means of cupping-glasses or leeches, and purgatives, and the various other antiphlogistic means employed. The eye should be frequently cleansed with warm water, or a weak warm solution of alum or bichloride of mercury, and one or two drops of a weak solution of lunar caustic (from two to

four grains to an ounce of water) should be let fall into the eyes once or twice a day.

Quinsy.—An inflammation of the throat, principally occupying the glands. This kind of inflammatory sore throat generally commences with cold chills, and other febrile symptoms. There is fullness, heat, and dryness of the throat, with a hoarse voice, difficulty of swallowing, and shooting pains toward the ear. When examined, the throat is found of a florid red color, deeper over the tonsils, which are swollen and covered with mucus. As the disease progresses, the tonsils become more and more swollen, the swallowing becomes more painful and difficult, until liquids return through the nose, and the viscid saliva is discharged from the mouth. Very commonly the fever increases also, and there is acute pain of the back and limbs.

Causes.—Exposure to cold, wearing damp clothes, sitting in wet rooms, getting wet feet, coming out suddenly of a crowded and heated room into the open and cold air. It may also be brought on by violent exertion of the voice, and by suppressed evacuations.

Treatment.—When the case is not severe, it may be treated in the early stages, like catarrh; but when it is, more active measures will be required. An emetic, followed by a strong purgative; a blister outside the throat, and warm bran or linseed poultices; a cooling regimen, with acid drinks, or pieces of rough ice put into the mouth and allowed to dissolve; leeches at the side of the throat if it swells much; inhaling the steam of hot water through a tea pot or an inverted funnel; and the continuation, every four hours or so, of a saline aperient. These will be the proper measures to adopt. When the abscess has burst, and the inflammatory symptoms have subsided, a generous diet will be necessary, with tonic medicines. If the tonsils continue swollen, they should be rubbed outside twice a day with stimulating liniments. Turpentine and opodeldock, equal quantities, will be as good as any; and the throat gargled with salt and water, a teaspoonful of the former put into a tumbler full of the latter.

When there is chronic soreness of the throat, with hoarseness and cough, there is commonly also a relaxed and elongated uvula, which closes the passage when the patient lies down, and causes a sensation of choking. In this case, a gargle made with salt and Cayenne pepper (about a tablespoonful of the former and a teaspoonful of the latter, in a pint of boiling water) should be tried; the throat should be kept uncovered, and sponged with vinegar twice a day. If these means are unsuc-

cessful, it may be necessary to have part of the uvula cut off. This must be done by a surgeon. Also, the application of caustic must sometimes be made when the throat has a granulated appearance.

Prickly Heat, or Lichen, is a disease caused by intense and long-continued heat; but it may be excited by the same causes which produce the nettle-rash, when the system is prepared for it. It is one of the most annoying plagues of a tropical climate.

Symptoms.—The general character of the disease is that of a diffuse eruption, with red pimples, and a troublesome sense of tingling or pricking. There is more or less general irritation, and sometimes a little fever at the commencement.

Treatment.—For the relief of the itching and burning sensation attendant on prickly heat, which in tropical countries are often absolutely unbearable, the best remedy is cold water —using caution when the patient is perspiring. Live sparingly, and take a few doses of a mild purgative, as the following: Powdered aloes, 2 drams; powdered rhubarb, 1 dram; powdered jalap, 2 drams; powdered cream of tartar, 4 drams; magnesia, 1 dram; best honey, 1 ounce. Mix well, and divide into 120 pills; take 2, 3, or 4 on going to bed.

Polypus of the Ear.—Polypus of the ear is by no means an uncommon form of the fungoid growth, which sometimes occurs in several of the internal tissues. It is of a jelly-like consistence, and a whitish yellow color, and is attached to the membraneous lining of the ear. There are also granulations of fungus which sometimes shoot up from the membrane, and are distinguished by their reddish hue from polypi. These may generally be removed by being held firmly with a pair of forceps, and then gently twisted and pulled at the same time. This should only be done by a properly qualified person, as much mischief may result from the unskillful application of the forceps to so delicate a part. Sometimes, when the polypus is in the external passage, and not far up, it may be destroyed by astringent applications, such as the muriated tincture of steel, or burnt alum, applied with a camel-hair brush.

Polypus of the Nose.—Polypus is a name given to a tumor generally occurring in the nose, but sometimes in the womb, or the ear, and so named from an erroneous idea that it had many roots or feet. It is the result of an excessive growth of the mucous membrane, and sometimes assumes a malignant character. It may be either of a soft texture so as easily to tear and bleed, or firm and fibrous, or even almost cartilaginous.

The color is commonly a yellowish grey, and it has little or no sensibility, although it causes much pain by its pressure upon the surrounding parts, stoppage of secretions, &c. It is attached to the surface from which it springs by a narrow neck like a footstalk. When in the nose it interferes with the breathing, so that the patient sleeps with the mouth open. In this situation it may sometimes be destroyed by the persevering use of astringent applications, such as the tincture of steel, applid with a camel-hair brush, twice a day, or a little burnt alum taken like snuff.

Rashes.—Patches of superficial redness of the skin; they may occur on any part of the body, and are generally accompanied by increased heat and irritation—sometimes by swelling, inflammation, and considerable pain; they are not contagious.

When red blotches occur in the face they are generally connected with some constitutional derangement—often with dyspepsia—to the cure of which the general treatment must be directed; the face should be washed in warm water, and the blotches dapped with camphorated spirit.

Rose Rash is common with children during dentition, and is, therefore, called tooth rash. It arises from intestinal irritation, and most usually shows itself about the face, although it may appear on any part of the body. With adults it usually occurs in hot weather; fatigue, drinking largely of cold water, or eating indigestible food, will bring it forth. It sometimes occurs during the eruptive form of small pox, and sometimes after vaccination, in a congeries of small dots or patches. Mild aperients, such as rhubarb and magnesia, cooling drinks, tepid baths, with frugal diet and rest, are the best remedies. There is usually considerable itching with these rashes, which may be allayed by the application of Goulard water, or some other cooling lotion.

Rheumatism.—The characteristic signs of this complaint are pains in the large articulations, following the tree or course of the muscles, and which are increased by external heat, together with fever. There are two kinds—*acute* and *chronic*.

Causes.—Obstructed perspiration, occasioned by wearing wet clothes, sleeping on the ground, or in damp rooms, or by being exposed to cold air when the body is much heated, and the like.

Symptoms.—In the *acute*, or what is called *rheumatic fever*, it usually comes on with lassitude and the rigors, succeeded by heat, thirst, anxiety, restlessness, and a hard, full, quick pulse, the tongue preserving a steady whiteness. After a short time

excruciating pains are felt, more especially in the shoulders, wrists, knees, and hips; and these pains are shifting from one joint to another, leaving a redness and swelling in every part they have occupied, as also great tenderness to the touch. Towards evening there is usually an increase of fever, and during the night the pains become more severe.

Chronic Rheumatism is attended with pains in the head, shoulders, knees, and other large joints, without any fever or inflammation. The complaint is either confined to a particular part or shifts about. It continues some time and then goes off, leaving the part in a debilitated state, and is very liable to fresh attacks on the approach of moist or damp weather.

Treatment.—Every symptom of this form of rheumatism proves it to be a disease of debility, consequently the mode of treatment must be founded upon this idea. Hence, stimulants of almost all kinds prove serviceable, together with tonics, warm bathing, &c. Let the patient be clothed in flannel next the skin, and take an aperient pill every night and morning. Also, take thirty drops of the wine of the seeds of colchicum in camphor julep three times a day. Or, take of flowers of sulphur and mustard, of each half an ounce; honey or molasses, a sufficient quantity to form a paste. Take a piece of the size of a nutmeg several times a day, drinking after it a quarter pint of the decoction of lovage-root. The following have also been very beneficial: Guaiacum in powder, and soap, of each one dram; essential oil of juniper-berry, four drops; mix, and divide into twenty-eight pills, two to be taken four times a day.

In *Acute Rheumatism* confine the patient in bed, and give half-grain doses of calomel and opium every four hours, and half ounce of castor-oil every other night. Or, keep the bowels open by means of gentle laxatives, administered occasionally throughout the course of the disease. Leeches may be applied to the inflamed joints; and, to assist their action, take the following mixture:—Tartar emetic, 2 grains; tincture of henbane, 2 drams; water, 6 ounces.

Mix. The whole to be taken in the course of the day, one or two tablespoonfuls at a time. The quantity of tartar emetic should be increased or diminished according to the effect produced on the stomach. This remedy, if carefully and perseveringly administered, will produce the most beneficial results.

Eclectic, or Herbal Treatment for Rheumatism.—Inflammatory rheumatism may be treated much like an acute fever. If young and strong, bleeding should be resorted to; and, to an adult, the following purgative: Calomel, fifteen grains; jalap,

twenty grains. Mix them well together, in sugar and water or syrup; after which take some gruel or warm balm, sage, or dittany tea, to produce a gentle perspiration. A tepid bath may then be taken, care being used that cold be not taken. Take for a few nights one dram of cream of tartar, and a half dram of gum guaiacum in powder, in a cup of wine whey.

For Chronic Rheumatism.—Take a little powdered Indian turnip once or twice a day, in honey or sugar and water. Mustard or horseradish should be taken with the food, and the body be encased in flannel and the flesh-brush frequently used. Where there is much weakness, from the long continuance of the disease, tonic medicines must be used. Dogwood bark, wild-cherry bark, and poplar bark, in equal quantities, made into a tea, and a wineglassful taken three times a day, is very good; as is also eight or ten drops of elixir of vitriol, taken three or four times a day in a wineglassful of water.

Ringworm is an eruptive disease of the skin—more particularly of the head—and of which there are several kinds.

Causes.—Ringworm has its seat in the roots of the hair, and is believed to be attended by the growth of parasitic fungi; its predisposing causes are any derangement of the general health from ill or under feeding, breathing impure air, drinking bad water, uncleanly habits, scrofula. Its immediate or exciting cause is generally contact with those affected with it, or using combs or hair brushes which they have used.

Wilson remarks "that improper food is a frequent predisposing cause, and that he has observed it in children fed too exclusively on vegetable diet." It is said to occur spontaneously in children ill-fed and uncleanly, and it is readily propagated by contagion. It has recently been discovered that this disease is owing to the presence of a cryptogamic parasite, called the *trichophyton.*

Symptoms.—The most common kind commences with clusters of small light-yellow pustules, which soon break and form into thin scabs, which, if neglected, become thick and hard by accumulation. When removed, they appear again in a few days; and by these repetitions the incrustations become thicker, and the area of the patches extends, so as, if unchecked, to affect the whole head, and extend also to the forehead and neck. The patches are of an irregular circular form. This disease occurs generally in children of three or four years and upward, and often continues for several years.

Treatment.—The treatment consists in applying to the parts some preparation which will destroy the fungus. The first

thing to be done is to remove the hair, and this should be done with a pair of pinchers, or some such depilatory as 1 part each of lime and carbonate of soda, and 30 parts of lard. Afterward the parts should be washed with a solution of bichloride of mercury (1 part to 250 parts of water), or with a solution of sulphurous acid (1 part to 8 of water). The general health should be at the same time attended to, and nutritious diet, tonics, cod-liver oil, and regular exercise used when necessary.

The vesicular form of ringworm is the simplest and most amenable to treatment; sometimes it disappears after careful washing and poulticing, with perhaps, a few applications of any astringent lotion; but the pustular form is far more troublesome and intractable, spreading often very rapidly, and running into ulcerous sores, and sometimes reappearing when it is thought that a cure has been effected. Nothing but the greatest care and attention will then eradicate it. Any child afflicted with this disease should be separated from other children, on account of its contagious nature; wearing each others caps and bonnets will be likely to spread it through a whole school.

Nettle Rash.—This is an eruption of the skin similar to that produced by the sting of nettles. It is not dangerous or contagious.

Causes.—It is generally thrown out by some particular kind of food which disagrees with the system, such as crabs, or other shell-fish, or mackerel; certain vegetables are likely to produce it, such as mushrooms, cucumbers, bitter almonds, or strawberries. Copaiba, cubebs, valerian, or the fumes of turpentine inhaled during house-painting, are also likely to occasion nettle rash.

Symptoms.—The eruption consists of little solid eminences of irregular outline, but generally roundish or oblong, and either white or red, or both red and white. It is accompanied with intense heat, and a burning or tingling in the affected spots. No part of the body is exempt from nettle rash. There are two varieties of this disorder, one of which is regarded as acute, the other as chronic, and either persistent or intermittent. The acute form is usually preceeded or attended with feverishness, and a feeling of general uneasiness, headache, nausea, and vomiting. In general it appears in the morning, vanishes in the course of a few hours, and perhaps reappears again twice or thrice during the day. It usually disappears entirely in six or eight days. The chronic form of this complaint is intractable and difficult to remove, coming and going for a lengthened peroid, but with little or no feverishness.

Treatment.—An emetic should be first administered, if the eruption is caused by anything recently taken into the stomach; it should be followed by a saline aperient—senna mixture, with salts, is perhaps best, and this repeated until the bowels are freely moved; if the febrile symptoms do not subside, a mixture composed of sweet spirits of nitre, 2 drams; liquor of acetate of ammonia, 1 ounce; and camphor mixture, 5 ounces, should be given, two tablespoonfuls every four hours. In the chronic form, a simple diet, active exercise, an avoidance of any articles of diet likely to excite the eruption; keeping the bowels regular by gentle aperients, combined with anti-acids; a five-grain rhubarb pill an hour before dinner, or a small piece of the root chewed, are good remedial means; the tepid bath should be occasionally used, or sponging, to keep the skin in a healthy state; to allay the irritations, dust starch-powder over the irruptions, or use a lotion made of rose or elder-flower water in half a pint of which has been dissolved, 1 dram of carbonate of ammonia, and ½ a dram of sugar of lead.

Scarlet Fever, or Scarlatina, is a contagious febrile disease, almost always attended during a part of its course by a rash and by sore throat. Sometimes only one of these features is well marked, sometimes both. Though persons of all ages are susceptible of it, it is eminently a disease of children. Like small pox or measles, it rarely attacks a person more than once. Physicians distinguish three different varieties of scarlatina—namely, *scarlatina simplex*, in which there is a florid rash and little or no affection of the throat; *scarlatina anginosa*, in which both the skin and the throat are decidedly implicated; and *scarlatina maligna*, in which the stress of the disease falls upon the throat.

Symptoms.—So plainly are the symptoms marked that it is scarcely possible to mistake this eruptive fever for any other; almost invariably we have first sore throat, with shivering, headache, and loss of appetite; probably there may be sickness and vomiting, with heat of skin, quick pulse, and great thirst. In about forty-eight hours from the commencement of the attack, we have an eruption of red spots on the arms and chest; these gradually become more thickly planted and widely spread, until they pervade the whole of the body, making the skin appear of one uniform scarlet tint, that is over the body generally; in the extremities it is more in patches, the skin being perceptibly rough to the touch. On the second day, generally, the tongue presents the appearance of being covered with a white film, through which the papulæ project as bright red

spots, as we see the seeds on a white strawberry; then the white creamy-looking film comes away gradually, and leaves the tongue preternaturally clean and red. On the fourth or fifth day the eruption begins to fade, and by the seventh or eighth has entirely disappeared, and with it the febrile symptoms. Then commences the peeling off of the cuticle or scarf skin, which comes away in scales from the face and body, and in large flakes from the extremities. It is during this process that the greatest danger of contagion is to be apprehended, and, until it is completed, the patient should be kept apart from the rest of the family: it may be hastened by tepid bathing and rubbing. Sometimes, with scarlet fever, there is little real illness; the patient feels pretty well, and, in a few days, would like to leave the sick chamber; but it is always necessary to be cautious in gratifiying such a wish, both for the sake of the invalid and of others; after an attack of this fever, as after measles, the system is peculiarly susceptible of morbific influences, and a chill taken at such a time may cause the most alarming results.

Sometimes we have a great aggravation of the symptoms above described; the throat gives the first warning of the attack; there is stiff neck, swelling of the glands, and the lining of the mouth and fauces becomes at once of an intense crimson color; there are ash-colored spots about the tonsils; the general eruption is of a deeper color, and spreads more rapidly, than in the simple kind.

Scarlatina Anginosa.—Then again we have the malignant form, with the rash in irregular patches of a dusky hue, which sometimes recedes and appears again. There is intense inflammation of the throat at the very outset, with general enlargement of the salivary glands; the neck sometimes swells to a great size; there is a sloughy ulceration of the throat, from which, and the nostrils—through which it is difficult to breathe—there comes an acrid discharge, causing excoriation of the nose and lips, and sometimes extending to the larynx and trachea, as well as to the intestinal canal, causing croup, vomiting and purging. The poisonous secretion enters into the circulation and vitiates the blood; sometimes the sense of hearing, as well as of smelling, is entirely destroyed by the acrid matter coming in contact with and inflaming the mucous membrane. With this form of the disease it is extremely difficult to deal, and the patient often sinks beneath it in spite of the best medical advice and assistance. Scarlet fever may be distinguished from measles by the following characteristics:

In scarlet fever the eruption appears on the second day, accompanied with sore throat, but no running of the nose. In measles the eruption comes out on the third or fourth day, with running from the nose and other catarrhal symptoms. The eruptions of measles are like flea-bites, slightly elevated from the surface, in patches the shape of a half moon; whereas the rash of scarlet fever is smooth to the touch, spreads over the whole body, and is of a brighter red color than measles.

Treatment.—At first mild aperients only should be given with diluted drinks, as flaxseed tea, and a spare diet; the patient should have plenty of fresh air; the head should be kept cool, the hair being cut close off or shaved. The following is a good febrifuge mixture: Carbonate of ammonia, 1 dram; solution of acetate of ammonia, 2 ounces; water or camphor mixture, 6 ounces. A tablespoonful to be taken every four hours—that is for an adult; a dessert-spoonful will be sufficient for a child. The whole body should be sponged with cool water as often as it becomes hot and dry. If the throat swells much externally, and there are headaches, apply a blister or hot bran poultice, and soak the feet and hands in hot water, with a little mustard or Cayenne pepper stirred in. To gargle the throat, dissolve 1 dram of common salt in ½ a pint of water; with children who cannot gargle, this may be injected against the fauces or up the nostrils, by means of a syringe or elastic gum bottle. When the inflammatory action has ceased and the skin is peeling off, it is necessary to take good stimulant and nutritious food, with tonics such as iron and quinine, unless they cause bad head symptoms, in which case these must be discontinued, and the diet chiefly depended on. When the system seems to be overwhelmed with the strength of the poison, a liberal administration of wine and bark will be required to sustain the flagging powers until the deadly agency has in some measure passed away. As gargles for the throat, a weak solution of chloride of soda or of nitrate of silver is very useful. A solution of chloride of potass in water (a dram to a pint) is recommended as a drink in this disease. The bowels also require to be carefully watched. It is of the utmost importance that the throat should be carefully treated. If neglected, the inflammation is liable to enter into the middle ear and cause life-long deafness, and perhaps ulceration of the ear, with discharges.

With regard to the more malignant form, but little is to done; the depressing effect of the contagious poison upon the whole body, and upon the nervous system especially, is so great as to defy all active treatment.

To assist the action of the skin, use the following: Pulverized gum arabic, 1 scruple; sweet spirits of nitre, ½ an ounce; tincture of veratrum viride, 20 drops; water, soft, 2 ounces. Mix, give half a teaspoonful every half hour.

As a preventive of scarlet fever, belladonna has been much recommended; its effect is to deaden the nervous energy, and render the system less susceptible of the contagion. If a solution of the extract be made in the proportion of five grains in 10 ounces of water, an adult may take 2 drams, and a child from 20 to 30 drops twice a day, for three weeks during the time when the fever is raging in a neighborhood. Recently carbonate of ammonia has been much recommended in the treatment of this disease. For adults five-grain doses; for children half the quantity three times a day. Very frequently, about ten or fourteen days after the subsidence of this fever, alarming dropsical affections result. These may be generally obviated by using daily the warm bath when the skin begins to peel off. When dropsy has set in, give a warm bath three times a week, and the compound tincture of Virginia snake root, in doses of a teaspoonful every two hours, in catnip tea, until free perspiration is induced.

Eclectic, or Herbal Treatment for Scarlet Fever.—In its milder attacks but little treatment is required. Give warm drinks of catnip, sage, saffron, or snake-root tea. Where the stomach is irritable and vomiting frequent, spearmint tea will be very beneficial, or a mustard plaster laid over the stomach will stop the vomiting. When an emetic is needed, give a teaspoonful of lobelia powder, the same quantity of powder of skunk cabbage, and a little Cayenne pepper, with a teaspoonful of sugar, in strong thoroughwort tea; give every half hour till free vomiting is produced. If the throat is sore and swollen, bathe it with a liniment made of 1 part of spirits of turpentine and 2 parts of sweet oil, applied while warm. A good gargle is take ½ a pint each of vinegar and water, hot, add 1 teaspoonful of blood root, and let it stand seven or eight hours before using.

It said that in the West Indies, where this disease frequently assumes the malignant form, cures are effected by the following simple preparation: Take 2 tablespoonfuls of Cayenne pepper, and a teaspoonful of salt; put them into a ½ pint of boiling water; let the mixture stand about fifteen minutes; then add a ½ pint of vinegar; let it stand a half hour, when strain through a fine cloth, and give two tablespoonfuls every half hour. If putrid symptoms appear, give common yeast, a wineglass every two or three hours.

A valuable preparation for inflamed or swollen face is raw cranberries pounded fine and applied.

On recovery the following good tonic may be given: Take of gentian root, colombo root, sweet flag root, golden seal root, Cayenne pepper, of each, in course powder, a heaped teaspoon; add 1 pint of sherry wine; let it stand a few days. Dose—a teaspoonful to a wineglassful three times a day.

Sciatica.—This a painful rheumatic affection, confined to the hip-joint and lower extremities, and affecting the large nerve (called the sciatic nerve) of the leg.

Treatment.—Apply a small blister on the spine at the bottom of the loins, and when it is removed sprinkle the surface with one-third of a grain of acetate of morphia, mixed in a little starch-powder. Or, apply to the part affected a bran poultice, to be followed twice or three times a day by an embrocation composed of one part of turpentine, and two parts of soap and opium liniment. A couple of drams of this should be rubbed in for ten minutes at a time. Meanwhile, cleanse the bowels by a purgative, and if there is no tendency to fever, take dram doses of carbonate of iron, three times in twenty-four hours. When the pain is very severe, accompanied with general fever, leeches should be applied, and cooling purgatives taken. It will also be advisable to employ the hot bath at a temperature of 105 degrees, and to remain in it from fifteen to twenty-five minutes. This should be repeated two or three times a week.

Scrofula (*King's Evil*).—This disease consists in hard indolent tumors on some of the glands on the various parts of the body, but particularly on the neck, behind the ears, and under the chin, which after a time suppurate, and degenerate into ulcers, from which, instead of pus, a white curdled matter is generally discharged.

Causes.—It may proceed from a hereditary taint, infection from a scrofulous nurse; children born of sickly parents, whose constitutions have been injured by secret diseases, are very likely to be afflicted with this complaint. It may likewise proceed from whatever tends to vitiate the humors and relax the solids, and very slight causes will produce it in those predisposed to it; such as blows, bruises, want of proper exercise, too much heat or cold, confined impure air, unwholesome food, bad water, the long use of poor weak watery aliments, and neglect of cleanliness; and nothing tends more to induce this disease in children than allowing them to continue long wet.

Symptoms.—At first small knots appear under the chin or behind the ears, which gradually increase in number and in

size, till they form one large hard tumor. This often continues a long time without breaking, until at length the skin covering the tumor acquires a purple or livid color, and being much inflamed they suppurate and break into little holes, from which a watery matter at first discharges; but this changes by degrees, until it becomes a viscid, serous discharge, much intermixed with small pieces of white substance resembling the curd of milk. Other parts of the body are also liable to its attacks, as arm-pits, groins, feet, hands, eyes, breast, &c. Nor are the internal parts exempt from it. It often affects the lungs, liver, or spleen, and frequently the glands of the mesentery are greatly enlarged by it. In some cases the joints become affected: they swell, and are incommoded with deep-seated excruciating pains, which are much increased upon the slightest motion. The swelling and pain continue to increase; the muscles of the limbs become at length much wasted; matter is soon afterwards formed, and is discharged by small openings bursting in the skin, being of an acrimonious nature; it corrodes the ligaments and cartilages, producing a caries or rotting of the neighboring bones. By absorption into the system of the matter, hectic fever at last arises, and consumption comes to end the sufferer's life.

Treatment.—The body should be regularly submitted to cold or tepid bathing, in order to promote the healthy functions of the skin. The diet must be carefully regulated, consisting chiefly of animal food, taken at certain intervals. For children, a very nourishing food may be prepared by boiling a small bag filled with suet in cow's milk. It bears a strong resemblance to goat's milk, but has the advantage of being more astringent. A pure, dry, and temperate atmosphere is the best to live in: and, during the summer months and the early autumn, much advantage may be derived from sea-air, combined with sea-bathing. All persons of scrofulous tendency should wear flannel continuously next their skin, it being the best protector of the body from the bad influence of our variable climate. A great variety of drugs have been employed in the treatment of scrofula, but they are all of secondary importance in comparison with the means above recommended. We give some of the most approved remedies for this disease: Iodine, 1 grain; iodide of potash, 2 grains; distilled water, 8 ounces.

Mix. To a child under seven years of age a dessert-spoonful of this mixture is to be given three times a day, in half a teacupful of water, sweetened with a little sugar. The dose to be gradually increased to two table-spoonfuls; and the remedy

is to be continued, if no unfavorable symptoms occur, for a period of four or five weeks; its use is then to be suspended, and gentle laxatives are to be adminstered. After an interval of a fortnight, the mixture is to be again administered, commencing with a dessert-spoonful, and gradually augmenting the dose as before. At the expiration of a month, the remedy is again to be discontinued, and again renewed. In this manner, the means of cure may be employed with perfect safety, and continued until the desired end is accomplished. Or, if preferred, the following: Gum guaiacum, ½ ounce; iron filings, ½ dram; white sugar, ½ ounce.

Mix. Of this powder a pinch, larger or smaller, according to the age of the child, is to be given twice a day, and continued for a considerable length of time. If symptoms of fever show themselves, the remedy is to be discontinued for a time. Meanwhile, a tepid bath should be taken three times a week, and the diet confined chiefly to broth and milk. Or the following:

Take a table-spoonful of cod-liver oil three times a day, and with it, when the glands are swelling, two grains of iodide of potassium, three times a day, in infusion of orange-peel. Also, paint the scrofulous swellings lightly with tincture of iodine. Then give twelve drops of solution of potash three times a day, and, after cleansing the sores with poultices, dress them with oxide of zinc ointment.

Eclectic, or Herbal Treatment for Scrofula.—Generally, we believe, nutritious food, pure air, great personal cleanliness, and gentle exercise, will be the best medicines for this distressing complaint. As soon as the swelling shows itself, apply a poultice, cold, of Indian turnip and slippery elm. Continue this till the swelling subsides or breaks, then use a poultice made of yellow or narrow dock-root and slippery elm. After a few days, change with a poultice made of equal parts of slippery elm, pulverized bayberry bark, and crackers.

An eminent physician has recommended the use of Peruvian bark and steel, to be taken alternately every two weeks. Also, the muriate of lime in doses of ten and increasing to sixty drops three or four times a day, in tea or water. Much benefit has been derived from taking pills made of tar. Take common tar, boil it down hard enough to make into pills, and take four every day. These also have been found very useful:

Gather the leaves of coltsfoot, when at their full growth; dry them, and infuse them in the same manner as tea; drink this beverage freely, instead of the beverage ordinarily drank.

Take every second day a few grains of rhubarb, drink freely

of goat's whey, and apply to the scrofulous sore the following ointment lightly spread on lint: White ointment, one ounce; levigated chalk, ten grains; red precipitate powder, half a dram. Mix. Salt water bathing is very useful.

Scurvy.—This complaint shows itself by a bleeding of the gums, and spots of different colors, on various parts of the body and limbs, on the skin, and the colors are, for the most part, purple or livid.

Causes.—Indolence, confinement, want of exercise, neglect of cleanliness, sadness, salt or putrified food, and foul water, or the prevalence of cold and moisture. It is sometimes produced by over-fatigue. In some persons it is constitutional, or hereditary.

Symptoms.—The scurvy comes on gradually, with heaviness, weariness, depression of the spirits, anxiety, and considerable debility. In the progress of the disease the countenance becomes sallow and bloated, and the respiration hurried; the teeth become loose, and the gums spongy and swollen, and bleed on the slightest touch; the breath is offensive, and livid spots appear on various parts of the body; severe wandering pains are felt, especially at night. The urine is scanty, and the pulse small and frequent; sometimes a scaly appearance of the skin; and the joints at last become swollen and stiff.

Treatment.—Nutritious and fresh animal food; rice, tapioca and sago, together with acid fruits and drinks; lemon-juice, in tablespoonful doses three times a day. Or the following: Purified nitre (saltpetre) 2 ounces; best white-wine vinegar, 1 quart. Mix. When dissolved, take a tablespoonful four times a day. If the gums are very bad, use to wash the mouth out frequently—decoction of black-currant leaves, one pint; muriatic acid, one dram. Mix, and gargle the mouth four times a day.

The following is very good: Take a dose of castor-oil, with ten drops of cream of tartar. If there be much pain and uneasiness, take at night twelve grains of Dover's powder; afterwards the following tonic: Decoction of bark, 6 ounces; syrup of orange peel, 1 ounce; compound tincture of bark, 1 ounce; carbonate of ammonia, $\frac{1}{2}$ dram. Mix, and take a sixth part twice or three times a day. Use a carrot poultice if ulcers appear on the legs, and dust the sores with carbonate of iron; or use this lotion—equal parts of tincture of myrrh and tincture of Peruvian bark, and wash twice a day. Avoid salt provisions and stimulants. When the scurvy is removed, treat as for indigestion.

Eclectic, or Herbal Treatment for Scurvy.—The treatment of scurvy is not difficult. Attention to the stomach and bowels, pure air, cleanliness, and gentle exercise are the chief requisites for recovery. The following has proved very useful: Put into a stone jar half a pound of the root of the great water-dock, cut into thin slices, and pour upon it one gallon of boiling water. Cover up and let it stand for twenty-four hours, then put the whole into a saucepan, and boil for ten minutes. Let it stand till cold, and strain off without squeezing. Dose, a half pint twice a day.

The diet should be light and nutritious. Take plenty of acids and vegetables, with as much horseradish, mustard, cresses, etc., as wanted; also, eat abundance of fruit.

Shrinking of the Heart (*Atrophy*).—A wasting of the heart's substance, arising from a deficiency in the supply of nutritive matter. It is usually accompanied by general emaciation, and will be pretty sure to terminate in death. When the heart is examined after death, the tissues are found to have undergone a change, and, instead of a striped, to present a homogeneous appearance. This is called "fatty degeneration." The treatment is to strengthen the system by tonics, wholesome and nutritious diet, open-air exercise, sea-bathing, and the like.

Sea Sickness.—This depends upon a peculiar state of the brain, apparently caused by a want of the usual firmness and steadiness of the equilibrium of the body.

Treatment.—Take of camphorated spirit, sal volatile, and Hoffman's ether, a few drops each, upon a lump of sugar. Persons about to proceed to sea should put their stomach and bowels in order by the use of mild aperients, and even an emetic if required; when it will be generally found that a glass of warm and weak brandy and water, to which one or two drops of creosote have been added, will effectually dispel any disposition to sea sickness. As the vessel descends draw in the breath, and as it ascends exhale the breath. This prevents the movements of the organs which act immediately upon sea sickness. Observe perfect quietude in the recumbent position, until the body is accustomed to the motion of the vessel; take frequently two or three spoonfuls of strong coffee; or twenty drops of hydrochloric ether. Hold fast by the ropes on the side of the ship, so as to move with all its motions, becoming, as it were, part of the vessel.

Small Pox (*Variola*).—This, like scarlet fever and measles, belongs to the class of eruptive fevers; it attacks persons of all ages, but the young are most liable to it. At no particular

season of the year is it more prevalent than at any other, nor does climate appear to be influential in averting or modifying its visitations.

Symptoms.—When it occurs naturally, the premonitory symptoms are those of other fevers of its class; there are usually cold chills, pains in the back and loins, loss of appetite, prostration of strength, nausea, and sometimes vomiting; with young children, there are sometimes convulsions. About forty-eight hours after these symptoms set in, an eruption of hard red pimples begins to overspread the face and neck, gradually extending downward over the trunk and extremities. Each pimple is surrounded by the peculiar dull red margin termed areola, and has a central depression on the top, containing lymph; at this period the eruption is decidedly vesicular, but it becomes afterward pustular; this change takes place on about the fifth day of its appearance, when the central depression disappears, suppuration takes place, and the vessels are filled with matter, which shortly after oozes out and dries into a scab. In about ten days this falls off, and leaves a pale purple stain like a blotch, which gradually fades, unless the disease has penetrated so deeply as to destroy the true skin, in which case a pit, or, as it is usually called, a "pock-mark," remains for life.

The primary fever of this disease lessens as soon as the eruption appears; but after this has left the face, and traveled downward, attacking successively the lower parts of the body, a secondary fever sets in, which is more severe than the first, and not unfrequently assumes a typhoid character.

Small pox may be either distinct or confluent. In the former case, the pustules are perfectly distinct from each other; in the latter they run into each other; this latter is the most dangerous form of the disease, the fever being more intense and rapid, and having no intermission; it goes on increasing from the first, and frequently by its violence, in nine or ten days, so exhausts the system that coma, delirium and death ensue, preceded by convulsions, hemorrhages, bloody stools, dysentery, and all the train of symptoms which indicate that a virulent and fatal poison has entered into the circulation.

Treatment.—As soon as the premonitory fever comes on, an emetic should be administered, and followed by a purgative of a tolerably active nature; then keep the patient on spare diet (certainly no meat), and give plenty of warm diluent drinks; keep the bowels moderately open by means of saline aperients; let the patient have plenty of fresh air, and sponge the skin with cool or tepid water, as may be most agreeable, to diminish

the heat of the body. Sometimes there is not energy in the system to develop the pustules with sufficient rapidity; in this case nourishment and stimulants should be given in the form of broths, wine whey, etc.; warm or mustard foot-baths should also be resorted to; and, to allay irritability, a ten grain Dover's powder may be administered at bed-time, or a $\frac{1}{4}$ of a grain of morphine, in camphor mixture. A good nourishing diet will be required in the secondary stage of the fever; and, if it assumes a typhoid character, the treatment should be the same as that of typhus fever. Frequently the face is much swelled, and the eyelids closed; in this case rub the latter with olive oil, and bathe the whole with poppy fomentation. If the throat is sore, use a gargle of honey and vinegar, 1 tablespoonful of the former, 2 of the latter, added to a $\frac{1}{2}$ pint of water or sage tea. If much affected, a blister should be applied to the neck. If there is much headache, cut the hair close, apply mustard poultices to the feet, and a spirit lotion to the head; to reduce itching, apply to the eruptions a liniment composed of lime water and linseed oil, equal quantities, or smear the pustules with cold cream; to check diarrhea, give chalk mixture, with 5 drops of laudanum in each dose; if perspirations are too copious when the eruptive fever has subsided, take acidulated drinks. Smearing the eruption with mercurial ointment, or puncturing each pustule, and absorbing the pus with wool or cotton, has been recommended to prevent the deep pitting which is so great a disfigurement to the face. Painting the face once or twice a day with glycerine is said to effectually prevent pitting.

There is no disease more certainly and decidedly contagious than this; after imbibing the poison, a period of twelve days generally elapses before the commencement of the fever, and during this time no inconvenience may be experienced. Beside breathing the effluvia arising from a person attacked, small pox may be communicated by inoculation with the matter of its pustules, and, the resulting disease being of a milder character, this method was formerly much practised to guard persons from a spontaneous attack; since, however, the introduction of vaccination by Dr. Jenner this practice has been abandoned. This disease is frequently epidemic, and the statistics of its different visitations show that the mortality of those attacked who have not been vaccinated is one in four; whilst of those who have, it is not one in four hundred and fifty; a strong argument this for vaccination where the disease prevails.

The following instructions for controlling small-pox contagion, enforced at Lowell, proved effective in arresting the spread of the disease:

ISOLATION.

1. Persons attacked with small pox or varioloid, and all infected clothing of the same, must be immediately separated from all other persons liable to contract or communicate the disease.

2. Nurses, and the infected clothing of such persons, must be treated as in quarantine.

3. None but nurses and the attending physicians will be allowed access to persons sick with small pox or varioloid.

4. Patients must not leave the premises until they, together with the bedding and clothing, have been disinfected, and permission given by some physician of the Board of Health.

DISINFECTION.

1. All bedding and personal clothing infected with the small-pox contagion, which can without injury, must be washed in boiling water.

2. Infected feather beds, pillows, and hair mattresses, must have contents taken out and thoroughly fumigated, and ticks, washed in boiling water.

3. Infected straw and excelsior mattresses must have contents removed and buried, and ticks washed in boiling water.

4. Infected blankets, sheets and pillow cases, and all articles in contact with or used by the patient, must be washed in boiling water.

5. Personal clothing and bedding—particularly comforters—which cannot be wet without injury, must be disinfected by baking or fumigation.

6. Instead of using boiling water as the disinfectant, the following chemical process with cold water may sometimes be conveniently substituted: Dissolve into a wash-tub containing 8 gallons of cold water 1 pound of the hyposulphite of soda. Immerse all the articles of clothing and bedding used by or around the patient, and, when thoroughly saturated, add ½ a pint of sulphuric acid, first diluting it with 1 gallon of water. Stir the whole, and allow the clothes to soak an hour; then wring them out, rinse three times in cold water, and hang them out to dry.

7. Disinfection of houses, clothing, and bedding by fumigation may be effected by filling the closed room with the fumes of sulphurous acid or of chlorine gas. The first can be accomplished by pouring ½ a pound of sulphur in an iron dish, pouring on a little alcohol, and igniting it, thereby causing the sulphur to burn and give off sulphurous acid fumes. The second can be accomplished by moistening with water 4 pounds of

chloride of lime, contained in an earthen or wooden vessel, and adding thereto a pint of muriatic acid, to liberate the chlorine gas. Clothing and bedding, to be well fumigated, must be separated as much as possible, and hung upon the walls and furniture of the room, so that everything will be thoroughly permeated. The rooms should be kept closed an hour or two after being charged with gas by either method, and then thoroughly ventilated. No attempt should be made to fumigate the sick room in this manner while it is occupied by the patient.

8. On the recovery, removal, or death of every case of small pox or varioloid, the clothing, bedding, and premises will be disinfected, in accordance with the above rules, under the direction of one or more physicians employed for the purpose by the Board of Health.

9. The physicians employed in disinfecting may cause removal, destruction, or burial of such infected bedding and clothing as may, in their judgment, seem to require it, of which they shall keep a correct record, with date, kind of article, whether new or old, estimated value, name and residence of the owner. No person shall burn any contagioned articles unless authorized by the Board of Health.

10. The sick room should be kept well ventilated, with such precautions as not to expose the patient to direct currents of air, and should be occasionally fumigated, slightly, by throwing upon a heated surface a few teaspoonsful of a solution of carbolic acid, made by dissolving 1 ounce of crystalized carbonic acid in a quart of rain water. Pieces of cloth may be soaked in this solution and suspended in the room, also in the the hall-ways adjoining. All vessels for receiving discharges of any kinds from patients must be emptied immediately after use and cleansed with boiling water. When convalescence has taken place, the patient must be thoroughly washed in warm water and soap, and put on fresh, clean clothes throughout.

11. Privies, water closets, garbage tubs, water pipes, and all kinds of drains and foul places in houses, stables, and yards, may be disinfected with a solution made as follows: Dissolve 8 pounds of copperas (sulphate of iron) in 5 gallons of water; add 1 quart of the solution of carbolic acid, and mix well.

12. It should be remembered that there are no substitutes for pure air and water. Let fresh air and sunlight purify every place they can reach; open and dry all cellars; keep the grounds about dwellings dry and clean, and let personal and domestic cleanliness be everywhere observed.

Vaccination and re-vaccination are of paramount import-

ance, affording the best attainable protection against small pox, and mitigating its severity when not preventing an attack.

PREVENTION OF SMALL POX.

At a time when small pox is prevailing, it is important to understand the most reliable preventive as well as curative measures in its management. Small pox is propagated by specific contagion or miasm, and by direct inoculation of the virus, or lymph, which accumulates in the pustules. The miasma of small pox is multiplied by heat, moisture, and foul air. Thus, a small quantity of the malaria, in a hot, damp, and filthy house, will increase so rapidly that the entire building will soon become a magazine of poison. The poison cannot develop itself in a pure and dry atmosphere, hence the first and most important preventive means against this loathsome disease is to remove all filth and moisture from dwellings. The second preventive measure consists in keeping the functions of the body active. This can be accomplished by avoiding excesses, by baths, a regular diet, and strict attention to cleanliness in every respect. Third, by vaccination, when properly performed. The best lymph to be used for vaccinating is that which is prepared in Germany and imported in quills. It should be introduced by slightly scarifiying the arm or calf of the leg (not sufficiently to draw blood), and, applying the lymph, allowing it to remain until it is entirely dry. If the first application does not take effect, it should be repeated every two or three days. In order to have vaccination certainly protective against small pox, it must produce the following constitutional symptoms: Light pain in the head, aching of the muscles, chilly sensations, and some fever, together with the development of a well-defined pustule, which will appear first as a small blister, then fill with grayish lymph, will dry, and become of a mahogany color, and upon scaling off will leave a pit. Inflammation may appear around the pustule, but as that occurs frequently as the result of the scarifying, it is not a positive indication that the vaccine disease has been perfectly developed. If the vaccination has been perfect, the system is as much protected as it can be, and observations prove that it is a preventive of small pox in ninety-three cases out of one hundred, and in the remainder it modifies it. The treatment of small pox should always be entrusted to a skillful physician, and, under judicious management, it is by no means a fatal malady.

Sore Mouth.—Some persons are much troubled with small ulcerations of the mouth, which give great inconvenience. They are seen on the edges of the tongue, the gums, and the inside of

the lips or cheek. They are small, irregular, superficial, often numerous, very painful, sometimes surrounded with many enlarged vessels and a small ring of bright red hue. They often prove obstinate, because they are caused by a bad condition of the bowels.

Treatment.—Take of honey two tablespoonfuls; borax, powdered, half dram; mix well together, and take a teaspoonful twice a day. The mixture should be placed in the mouth, little by little, touching the various ulcers that are visible, or can be got at.

Sore Tongue.—The tongue is liable to become sore or ulcerated, most commonly along the edges; and there are frequently seen small pimples and cracks.

Treatment.—Take mild and cooling aperients, particularly calcined magnesia, either alone or in a seidlitz powder. Let the drink consist chiefly of soda-water, and the diet be light and cooling. Touch the sores with burnt alum, and wash the mouth frequently with borax and honey dissolved in water, or solution of chloromated soda and water, so weak as not to produce much smarting.

Diseases of the Spinal Cord.—The spine is liable to many injuries. If it be broken or crushed at any part, all the nerves are immediately powerless below the injury: the sense of feeling and motion are stopped. If the cord is injured at its upper part, death at once ensues.

Concussion of the spine is sometimes a consequence of coming too suddenly and heavily on the feet, especially on the heels. It is followed by a want of nervous energy, and a depressed state of the system altogether; there is a loss of sensation and motion in the lower part of the body, and frequently inability to pass the urine, there being in fact, partial or entire paralysis.

Sometimes there is acute pain in the lower limbs, and symptoms of active inflammation may set in, which will require leeching or cupping, with hot fomentations and the usual depletive measures. In such a case, pending the arrival of the medical man, little can be done beyond placing the patient in as easy a position as possible, and applying moist heat to the lower part of the spine; an active purgative may be administered, and a dozen leeches applied to the back, should it be long before the surgeon arrives, if the patient is of a full habit and in much pain. Should the shock be but slight, the effects will probably soon pass off: but it is necessary to be cautious, and avoid any violent exertion, especially such as jumping, for a time.

Often these cases are very tedious; the lost powers are recovered slowly, if at all. Friction with stimulating liniments, salt-water bathing, the douch bath, gentle exercise, and nourishing diet, are the means to be pursued. When there is displacement of the vertebræ, which can only be caused by extreme violence, and in which case there is also generally fracture of the bone, there must be injury of the spinal cord, and if at all high up, instant or speedy death is the result; if low down, permanent paralysis of the lower limbs most likely ensues. (For treatment, see *paralysis*).

Apoplexy of the spinal cord is not an unfrequent concomitant of epilepsy. With this we have convulsive twitchings, pain, and imperfect performance of the functions of motion and sensation. Soothing, palliative measures, are the only ones to be adopted in this case. Hot bran poultices, and opiates, if there is severe pain; but these should be cautiously given, and not carried to any great extent without professional advice.

Stiff Neck.—A complaint brought on by sitting or sleeping in a draught, at an open window, etc.

Treatment.—Rub the neck well with hartshorn and sweet oil, two or three times a day; and wear round the neck a piece of new flannel, moistened with the hartshorn and oil.

Sore Throat.—This is commonly a symptom of inflammatory fever, and is often the result of a simple cold. Some persons are peculiarly liable to it, and experience great difficulty of swallowing from relaxed uvula. Sometimes in sore throat there is simply inflammation of the mucous membrane; and when this is the case it will probably pass away in a day or two, with a little careful nursing and aperient medicines. Should it extend into the air passages, causing cough and catarrhal symptoms, it becomes a more serious business, and medical advice should at once be sought. In the meantime, a saltpetre gargle should be used, or sal prunella balls, one being put into the mouth occasionally and allowed to dissolve. Hot bran poultices may also be placed about the throat, which, at a later stage, may be rubbed with a liniment of oil and hartshorn.

There is an erysipelatous form of sore throat which is highly dangerous, and requires very active treatment. A strong gargle of lunar caustic must be used in this case, or the inflamed part must be pencilled with the caustic in the stick. If it extends to the larynx and air passages this frequently proves fatal. This is a distinct disease from diphtheria.

Stiffness of Joints. (*Anchylosis*).—This may be caused by the introduction of the lava of an insect, or from a violent blow

or fall, either of which will often bring on an inflammatory action, with an exudation and deposit of gritty matter, which settles between the bones forming the joints, and thus prevents their free movement.

Treatment.—Take a vessel sufficiently deep to admit of the immersion of the leg up to above the knee. Nearly fill it with water of the temperature of ninety-eight degrees, and pour in a strong decoction of elder-flowers and tar. Take this bath night and morning; and apply to the affected part, three times a day, compresses saturated with the following lotion: Liquor of ammonia, 2½ ounces; camphorated alcohol, 3 drams: bay salt, 1¼ ounces; water, 1 quart.

Mix. The compresses should remain on for ten minutes at a time. Afterwards apply a plaster made as follows: Lard, ten ounces; yellow wax, three ounces. Mix these over the fire, with just sufficient hot water to form a mass; and add grated camphor, three ounces. Remove from the fire, and let it cool. When sufficiently congealed, spread it with the blade of a knife or the handle of a spoon, upon a piece of linen of the size required; and cover the whole with oilskin. Or, bathe the part night and morning with warm salt and water; rub well in, two or three times a day, almond-oil; and, at the same time, endeavor by gentle movement to loosen the joint.

Stitch in the Side or spurious pleurisy, is a spasmodic affection of the muscles of the chest, and is rheumatic in its origin. With this there are not the symptoms of inflammation nor the difficulty of breathing, except that caused by the pain or stitch in the side. Exposure to cold or violent exercise will also cause this. It generally yields to warm applications, mustard poultices, or stimulating liniments. The best medicines in this case will be pills of colocynth three grains, with extract of colchicum one-quarter of a grain in each, taken every night; and three times a day a seidlitz draught, with fifteen grains of wine of colchicum and six of laudanum in each.

St. Vitus's Dance (*Chorea*).—This disease is more common in females than in males, and usually occurs in children from eight to fourteen years of age.

Causes—The predisposing cause of this disease is undoubtedly debility, generally dependent upon too rapid growth. The approach of puberty has been considered a predisposing cause of chorea; and so far as the changes then effected are causes of general weakness, the idea may be correct, but their farther influence may well be doubted. In boys, however, sexual excitement, and particularly certain criminal indulgences,

not uncommon at this age, should be suspected, when symptoms of chorea begin to manifest themselves. The too frequent use of vegetables, and the presence of worms, are also regarded as common causes.

Symptoms.—The precursive symptoms are variable appetite, sometimes ravenous and sometimes wanting, a degree of listlessness and inactivity, a swelling and hardness of the belly, usually accompanied with constipation, and slight, irregular convulsive motions of the muscles of the face. As the disease advances, the muscles of the extremities, of the lower jaw, the head, and the trunk, are in various degrees affected. In this state the patient is unable to walk steadily, his only movement being a kind of jumping or springing; or, perhaps, he is compelled to run in order to make any progress. To whatever set of muscles it is attempted to communicate motion, these immediately become affected with the diseased action, and either refuse to obey the will, or obey it imperfectly, and by jerks in uncertain directions. Even if speech be attempted, articulation is found impossible, or the words are uttered with embarrassment and difficulty. In the progress of the disease, the eye loses its brightness and intelligence, and the countenance becomes pale and vacant. In some cases actual loss of mental power seems to follow.

The whole muscular system is never simultaneously affected; and, in some instances, the perfect control which is retained over a part, compared with the mutinous state of the remainder, is very remarkable. Sometimes, though the gesticulations are most absurd, the speech is easy and fluent; and sometimes, when unable to walk with any approach to regularity, the patient can sing and play with the most perfect correctness.

Cleanse the stomach. For an adult, give an emetic, as follows: Pulverized ipecac, 10 grains; tartar emetic, 3 grains.

Mix in nine teaspoonfuls of warm water. Dose, three tablespoonfuls at first, and then one tablespoonful, every fifteen minutes, till vomiting ensues. The next day give the following aperient; Calomel, 15 grains; pulverized rhubarb, 10 grains; aloes, 10 grains.

Mix. Divide into six pills. Dose, two every two hours, working them off with gruel, with salt in it. A complete cure has been effected by giving two drams of carbonate of iron in molasses every six honrs. To allay the nervous irritation, give Indian hemproot tea. An occasional tepid foot-bath will be found useful.

Strumous, or Scrofulous Opthalmia.—The strumous form of opthalmia is occasionally met with in persons of all ages, but it more especially attacks weakly and scrofulous children who are under eight or ten years of age.

Symptoms—A peculiar intolerance of light is one of its most marked symptoms. A spasmodic closure of the lids takes place whenever much light is presented to the eye. On forcing them open, the conjunctiva will generally be found universally inflamed, but sometimes only partially so; but that which especially distinguishes this form of opthalmic disease is the presence of—it may be one, or two, or several—little bright red pustules, each terminating a vein of the same color, and the parts on which they exist are the most inflamed.

Treatment.—Local applications will do little or nothing for the cure of this disease. The treatment must be general and generous. The cause is usually obstructed or unhealthy secretions, and if these are rectified the effect will soon disappear. Attention must be first paid to the state of the liver and kidneys. If these are deficient in action—if there is anything wrong with the bile or the urine—administer the appropriate remedies. After this, administer tonics in combination with sedatives—say quinine and digitalis; or, if this affects the action of the heart too much—hemlock. They may be given in the form of pills, one grain of the first and one-third of a grain of the second or third, three times a day. With some constitutions, the iodide of potassium acts best; therefore, if the above does not succeed, take the following: Iodide of potassium, 2 scruples; compound essence of sarsaparilla, 4 drams; tincture of digitalis, or hemlock, 1 dram; cinnamon, or mint water, 8 ounces. It is sometimes advisable to add to this sweet spirits of nitre about a dram. In obstinate cases the pustules may be touched with nitrate of silver, but this should be left to a competent surgeon.

Styes.—Styes are little inflammatory tumors which frequently make their appearance on the edges of the eyelids of children. They rarely affect grown persons; and, although troublesome, are not all dangerous locally, nor prejudicious to the general health. They run the same course as boils, which in reality they are.

Treatment.—Generally they require no medical treatment, but when very large and painful, a hot water fomentation will prove beneficial. When once the matter has escaped, they heal very quickly. A simple dressing of spermaceti ointment is sometimes required, but not often.

Squinting (*Strabismus*).—Squinting is a disease of the eyes, in which they do not move in harmony with each other. Squinting may be confined to one eye, or it may affect both, and it may be in any direction. If the sight of both eyes is equally good, or nearly so, then all objects are seen double; but if the sight of one is much better than that of the other, the mind only attends to the more vivid impression, and disregards the weaker. Squinting is owing to some affection of the nerves or muscles of the eye. In most cases, it admits of cure by the operation of dividing the muscle by which the distortion is produced.

Suppression of Urine.—If there is a frequent desire of making water, attended with much difficulty in voiding it, it is called *strangury*. If none is made, suppression of urine.

Causes.—Inflammation of the urethra or passage, or sores, or severe inflammations about those parts; a lodgment of hard matter in the last gut or rectum, spasm at the neck of the bladder, exposure to cold, taking to excess cantharides, or blistering back, excess in drinking, stone in the kidneys or bladder, and enlargement of prostate glands.

Symptoms.—A constant desire, or feeling of necessity to make water and cannot, or if parted with, much pain and difficulty in passing it; much enlargement of the bladder. If from stone in the kidney be the cause, often nausea, vomiting, and acute pain in the loins; if from stone in the bladder, the stream of water will be divided into two, or suddenly checked.

Treatment.—If much inflammation and irritation exists, all straining to expel the urine should be avoided, and it let off by a catheter every six hours, or, as it is commonly called, drawn. The following will be found very useful remedies: Anodyne diuretic draught: Mucilage of gum acacia, six ounces; olive oil, one and a half ounces; mix well in a marble mortar, then add six drams of spirits of sweet nitre: laudanum, one and a half drams; fennel water, three ounces; mix, and take three tablespoonfuls every three hours; or this: Demulcent diuretic draught: Acetate of potash, two drams; laudanum, one and a half drams; syrup of marsh mallows, one and a half ounces; fennel water, eight ounces; mix, take three tablespoonfuls every three hours.

The bowels must in all cases be kept free by using the following often: Emollient clyster: Balsam of capivi, two drams; yolk of an egg; rub this and the balsam together; then add castor oil, half ounce; laudanum, one dram; compound decoction of marsh mallows (that is well boiled), eleven ounces; mix, inject up the rectum; this foments and soothes the parts.

Syphilis, or Pox, is usually acccompanied by three distinct characters of sores or ulcers: first, the common primary venereal sore; secondly, the phagedenic or sloughing sore; and thirdly, the true syphilitic or Hunterian chancre. The common venereal sore usually appears in three or four days after connection; the patient feels an itching about the tip of the penis, finds either a pustule or an ulcer, situated either upon the prepuce externally or internally, at its junction with the glans, or on the glans itself, or at the orifice of the urethra at its union with the bridle or frænum.

The form of this ulcer is generally round or circular, and is hollowed out, presenting a dirty, brown, hard, lardaceous surface, which secretes a puriform matter. When this ulcer is situated on the prepuce, it becomes raised, particularly at its edges; when in the fossa, or at the root of the glans of the penis, it is ragged; and when on the glans, it is excavated. Its progress is first destructive, and then suppurative; and, if not interfered with in favorable cases, usually runs its course in about twenty days—the destructive or ulcerative stage lasting about ten days, and the granulating or healing stage lasting the remaining ten. This sore is unaccompanied by any thickening or hardened base in the first stage, unless interfered with by mal-treatment, dissipation, or the abuse of caustic. This sore is frequently productive of swelling and inflammation in the groin, and is followed by warts and growths of an unhealthy character situated betwen the thighs, purse, and lower parts of the body, and between the buttocks.

Treatment.—In the first stage—that is, before the crust falls off, or where the ulcer is very small—the sore should be touched with lunar caustic; this frequently stops the ulcerative stage, and causes it to take on a new action by which it heals; the same application, but weaker, will be necessary if the sore becomes indolent. During the ulcerative stage, or that stage in which the ulcer increases instead of diminishes, great attention must be paid to cleanliness; the sore should be washed three or four times a day with warm water, a piece of lint or fine linen, covered with spermaceti ointment, or wetted with blackwash, should be applied to it after every washing. The bowels should be kept open, and five grains of blue pill, or five grains of Plummer's pill, administered night and morning, taking care not to produce salivation. When the sore assumes an indolent character, great benefit will be derived from the application of the following wash: Lunar caustic, 5 grains; distilled water, $1\frac{1}{2}$ ounces.

Mix. A piece of lint or linen, wetted in this lotion, to be applied to the sore three or four times a day.

Black wash is the best application for those warts and growths which spring up about the anus and buttocks. The swelling in the groin, arising from the common venereal sore, seldom requires any treatment; but if it should prove troublesome and painful, leeches may be applied, followed by fomentations and poultices. The patient should rest as much as possible, and make use of a plain, unstimulating diet.

In the treatment of phagedenic or sloughing ulcer, no specific rules can be laid down, the sores at one time requiring a stimulating and at another time a soothing method of treatment. This sore usually commences from an excoriation, or a pustule, as in the case of common venereal sore, or it may follow that form of the disease. It is known by that process of extension by which its edges appear to melt away; "the action is chiefly confined to the margin, which the destructive process having undermined, overlaps with an irregular and ragged edge." In this form of ulcer, the reparatory action commences as soon as the destructive is exhausted, so that the two processes advance together at opposite edges, the sore ulcerating at one part and healing at another at the same time. In the commencement, the sore may be touched with nitric acid, or diluted nitric acid, upon two or three occasions, and if found not to agree, the stimulating treatment should be laid aside, and the soothing substituted. It may now be washed with warm water, and various applications tried, as it is impossible to say what form of wash will answer best. Those in most repute are the black wash, yellow wash (yellow wash is made by adding six grains of corrosive sublimate to four ounces of lime water), diluted nitric acid, Peruvian balsam, and solutions of the nitrate of silver. If the patient be of a full habit, he may lose blood from the arm with advantage, and take salines and antimonials. If weak, he should live generously, and mercury should be administered with great caution.

For the treatment of the true syphilitic or Hunterian chancre, mercury is the sheet anchor, and must be employed either internally or externally, or, where circumstances require it, by both means. This sore, unlike the preceding, seldom appears before a week or ten days, and is sometimes not detected for four or five weeks after connection. It appears in the form of a red, raw, superficial ulceration, placed on a circumscribed, elevated, hardened base. This base is firm, incompressible, and inelastic, and is as hard as cartilage; it is destitute of pain and

very slow in its progress. This form of the disease is generally accompanied by true bubo—that is, inflammation of one or two glands in the groin, distinct and circumscribed in their outline, and totally dissimilar to those swellings in the groin arising from gonorrhea or the common venereal sore.

As soon as the sore is detected, the patient should commence taking five grains of blue pill, and a quarter of a grain of opium, made into a pill, night and morning; and he may, at the same time, in order to bring the constitution as soon as possible under the influence of mercury, rub in, twice a day, along the inside of the thigh, about the size of a nut, an ointment composed of blue or mercurial ointment and camphor. The following is the formula: Rub down twenty grains of camphor on a slate with a spatula, having previously saturated it with spirit of wine, and then mix it up with the mercurial ointment. This treatment should be continued only until the mouth and gums become slightly affected, when it should be left off for a short time. The patient should be kept under the influence of the medicine for three or four weeks, and then the decoction of sarsaparilla and the hydriodate of potash administered. Five grains of the latter, in a common-sized tumblerful of the former, may be taken three times a day, and continued for a month, according to circumstances. The sore, in the meantime, should be kept clean, and such applications employed as may happen to agree with it best; these consist of washes of nitrate of silver, black wash, and spermaceti ointment.

When the ulcer cicatrizes, or heals, and any hardness remains, mercury should be given to promote its absorption, and the skin destroyed by the direct application of the nitrate of silver.

When the disease has been neglected, or a sufficient quantity of mercury has not been given, the constitution becomes affected in a time varying from six weeks to three months, which manifests itself by producing sore throat, disease of the skin, and inflammation of the eyes. These diseases must be severally treated by the remedies already recommended.

When a bubo becomes troublesome and painful, it should be well leeched, fomented, and poulticed; and should it proceed to suppuration, the matter must be let out by a free incision with a lancet, as soon as fluctuation is felt.

During this disease, the patient should be warmly clad, he should rest as much as possible, and live on plain, unstimulating food. In the commencement, he should refrain entirely from spirits, wine, or fermented liquors; he should not expose him-

self to wet, damp, or the night-air, and he should pay strict attention to his bowels.

The syphilitic poison, when it has once entered into the system, is with great difficulty eliminated, and sometimes shows itself in children several generations removed from the person originally infected. It may be communicated by a pregnant woman to the child in her womb through the medium of her blood, by which the fetus is nourished; and thus, as in numerous other cases of disease, the children suffer for the sins of the parent.

On those parts which are essential to life, such as the brain, heart and abdominal viscera, this poison does not appear to be capable of exercising any destructive power; but the bones, muscles, tendons, and skin readily partake of its malignant nature. Hence we see so many persons dragging out a wretched existence, a misery to themselves and an eye-sore to society—left, as it were, by the Almighty to warn others against vicious practices, and point the moral of the preacher against vice and immorality.

Stammering.—This defect of speech sometimes proceeds from functional disorder, sometimes from nervousness, sometimes the result of irritation. From whatever cause it originates, it is in the majority of cases to be cured by an exertion of the will.

Treatment.—Stammerers, although they cannot speak a single sentence without hesitation, can sing a song of many verses as fluently as any person; and it is almost as true that stammerers can read with equal ease. It is therefore to be recommended that those who stammer should begin with a set of exercises of commonplace sentences, chant to the first bars of the simplest melody, such as "My Country," and from that, practise those sentences upon one note, ending a note lower or higher, slowly at first, but gradually increased to rapidity.

Tetter.—After a slight feverish attack, lasting two or three days, clusters of small, transparent pimples, filled sometimes with a colorless, sometimes with a brownish lymph, appear on the cheeks or forehead, or on the extremities, and at times on the body.

The pimples are about the size of a pea, and break after a few days, when a brown or yellow crust is formed over them, which falls off about the tenth day, leaving the skin red and irritable. The eruption is attended with heat, itching, tingling, fever, and restlessness, especially at night. Ringworm is a curious form of tetter, in which the inflamed patches assume the form of a ring.

Treatment.—The treatment should consist of light diet and gentle laxatives. If the patient be advanced in life, and feeble, a tonic will be desirable. For a wash, white vitriol, 1 dram; rose-water, 3 ounces, mixed; or an ointment made of elder-flower ointment, 1 ounce; oxide of zinc, 1 dram.

Humid Tetter is an eruption of minute, round pimples, about the size of a pin's head, filled with colorless fluid, and terminating in scurf. It is preceded by languor, faintness, perspiration, and a pricking of the skin. Another species of this disease is called sun-heat, which is an eruption of a white or brownish color, which generally terminates in yellow scabs. It occurs only in summer, and affects those parts which are uncovered.

In still another species, the eruption is attended with pain, heat, itching, intense smarting and a swelling of the affected part. When the blisters break, the water runs out, irritates and inflames the skin.

Treatment.—Low diet, cooling drinks, gentle purgatives, and warm baths. In old chronic cases, apply externally either lime water or corrosive sublimate in a wash proportioned of 5 grains to 1 pint of soft water. In the last two forms of the affection apply nitrate of silver, in solution, to the parts.

Crusted Tetter.—This eruption consists at first of slightly elevated pustules or pimples, closely congregated, with an inflamed border. These break, and the surface becomes red, excoriated, shining, and full of pores, through which a thin, unhealthy fluid is poured out, which gradually hardens into dark, yellowish-green scabs. When this tetter invades the head or scalp, it causes the hair to fall off, and is termed a *scall.*

Treatment.—Vapor bath and water dressing. The crusts should be removed by a weak lye, made from hard-wood ashes or potash; then an ointment should be applied, made of mild nitrate of mercury ointment, 3 drams; sugar of lead, 16 grains; rose-water ointment, 1 ounce.

Tooth-ache.—For this distressing and very common malady almost every one has a "sure cure," the peculiarity of which is, that it does little or nothing to mitigate the anguish of the sufferer to whom it is recommended. Among the remedies which we have to suggest, as having found them pretty generally successful, are, creosote, chloroform, and laudanum. Separately or in combination they may be tried all ways. The mode of application is to saturate a small piece of lint or wadding, and introduce it into the hollow of the tooth, keeping it there as long as may be necessary. Should there be no available hollow, put it as close as possible to the seat of pain. Many of the other rem-

edies recommended we have known to afford relief occasionally; such as inhaling the vapor from henbane seeds, put on a hot piece of metal; chewing a piece of pellitory-root, or using the tincture: putting a piece of sal prunella in the mouth and allowing it to dissolve; applying a drop or two of the oil of cloves, or cinnamon, on lint; or thrusting into the hollow tooth a piece of wire previously dipped in strong nitric acid,—this application, if properly made, destroys the nerve, but it must be very carefully done, so that the acid does not touch the other teeth or the mouth. An aching tooth may oftentimes be stopped, and remain serviceable for years; but this must not be done while the nerve is in an inflamed state, as in this case the pressure will but increase the anguish. Where a tooth is so far gone as to be very troublesome, it is best to have it out.

Ulceration of the Bones (*Caries*).—This is a disease of the bones analogous to ulceration of the soft parts. It most frequently attacks the bones of the spine ; but it may affect any of the bones, especially such as are of a spongy texture.

Causes.—The young, or those of a scrofulous habit of body, are most subject to this disease. It sometimes appears spontaneously; at others, as the result of an injury, as a blow or fall.

Symptoms.—It begins with inflammation, usually attended with a dull, heavy pain, and weakness in the part affected. In course of time an abscess forms, which, if not arrested, at length bursts and discharges a thin fluid containing particles of the bone. In caries of the vertebræ, curvature of the spine takes place.

Treatment.—Much may be done in arresting the progress of this disease in its earlier stages. The patient should be strengthened by good air and nourishing diet, at the same time that rest is enjoined. The state of the stomach and bowels should also be attended to, In the local treatment of the disease, blisters, leeches, and issues are to be employed. The abscesses are best left to nature, unless they are productive of much uneasiness. When they have burst, the exfoliation of the diseased part should be expedited ss much as possible ; or, when practicable, the whole of the diseased portion should be removed by a saw or gouge, so that the healthy portions may granulate and heal.

Ulcerated, or Putrid Sore Throat.—This sort of sore throat shows itself by white specks, covering ulcers, appearing in the throat, together with great debility, and an eruption on the skin.

Causes.—Contagion (infection); from a humid state of the

atmosphere, it becomes epidemical, and will sometimes rage through families, villages, or towns; and is also produced by similar causes to typhus, or malignant fevers, to which it seems akin in its nature.

Symptoms.—It commences with cold shiverings, anxiety, nausea and vomiting, succeeded by heat, thirst, restlessness, and debility; also, much oppression at the chest; the face looks flushed, the eyes are red, a stiffness is perceived in the neck, with a humid breathing, hoarseness of the voice, and soreness in the throat. After a short time the breath becomes offensive, the tongue is covered with a thick brown fur, and the inside of the lips is beset with vesicles, containing an acrid matter; upon inspection of the throat, a number of sloughs, between a light ash and a dark brown color, are to be seen. From the first attack of the complaint, there is a considerable degree of fever, with a small irregular pulse, and the fever increases towards the evening. About the second or third day, large patches make their appearance about the face and neck, which by degrees become dispersed over every part of the body. As the sloughs in the throat spread, they generally become of a darker color, and the whole throat is soon covered with thick sloughs, which, when they fall off, discover deep-seated ulcers.

Treatment.—The bowels should be opened with a dose of Rochelle salts or sulphate of magnesia. To cleanse the throat, use the following gargle: Honey of roses, 1 ounce; tincture of myrrh, ½ ounce; vinegar, 1 ounce; decoction of barley, 10 ounces. Mix and use frequently. Or the following: Muriatic acid, 1 dram; compound tincture of cinnamon, ½ ounce; tincture of myrrh, 1 ounce; decoction of Peruvian bark, 6 ounces. Mix, and use frequently. Breathe the steam of hot vinegar and water into the throat.

The following is a good astringent draught: Aromatic confection, 1 dram; tincture of catechu, 1 dram; laudanum, 30 drops; chalk mixture, 2 ounces; cinnamon water, 2½ ounces. Mix. Take two tablespoonfuls every four hours. Shake well always before taking. Sometimes bleeding from the mouth, nose, ears, takes place in the latter stages of the disease; and becoming alarming, use the following as a wash: Sulphate of copper, 1½ drams; alum, ½ dram; rectified spirit of wine, 1 ounce; pure water 7 ounces. Mix and apply internally with a tent, or on linen cloths. The diet must be light and nourishing —tapioca, sago, rice, and the like; the drinks must be acidulated; free air, but not cold; the room sprinkled with vinegar, and generally as is laid in acute and typhus fever, use the following in the room, as a purifying anti-infectious gas:

Take a pound of common salt, put it into an earthen dish, occasionally pour a tablespoonful of sulphuric acid (oil of vitriol); stir up with a stick, avoid breathing over it when the fumes are rising. Do this four or six times a day, whenever infectious diseases are raging. It is a great preventive.

Eclectic or Herbal Treatment for Throat Diseases.—For putrid sore throat, at its early stage, give an emetic, and follow by a cathartic if the bowels are costive. A mixture composed as follows has been found very beneficial:—

Take a half a pint of fresh brewers' yeast, and mix with a half pint of water; add sufficient brown sugar to flavor. Dose, one teaspoonful every two hours. Good results have frequently followed a gargle made of yeast and milk, or of sage and vinegar. A small quantity may be swallowed with benefit. Or use the following: Sumac berries, 1 ounce; white oak bark, 1 ounce; red elm bark, 1½ ounces; blackberry root, 1½ ounces.

Make a decoction with sufficient water, and to each pint add a piece of alum about the size of a walnut; when cool, strain, and use as a gar le.

What has been said under the head of putrid sore throat, will be found useful in the treatment of quinsy. When there is a tendency to this disease, the throat should be sponged every morning with cold salt water. Local applications are of great value. Great relief is experienced by inhaling the steam of hot vinegar or water from a teapot. Gargles made of port wine or brandy and water are very useful in restoring the tone of the fibres, when relaxed from distention.

If the attack increases in severity, use a decoction of wormwood, hops, and catnip, with equal parts of soft water and vinegar; boil for two hours. Put the preparation in a large pitcher and place a funnel over it, by which means let the patient inhale the steam for fifteen or twenty minutes, every two hours.

The following liniment is very useful: Sassafras oil, ½ ounce; olive oil, ½ ounce; spirits of hartshorn ½ ounce; gum camphor, 2 drams. Mix; warm, and bathe the throat as long as the patient can bear it, several times a day, after which bind a piece of flannel round the neck, soaking the feet in warm water every night, in quinsy.

In the treatment of mumps, it is seldom that medicine of any kind is needed. Keep the patient in a warm bed, and promote perspiration by the free use of balm tea. Bathe the feet in a tepid bath, and keep the bowels open. If the swelling greatly increases, use a poultice of wild indigo and slippery elm. If the testicles swell, bathe them with sweet oil and camphor. If

the pain still continues, use the following liniment: Scraped castile soap, 1 dram; sassafras oil, ½ ounce; sweet oil, 1 ounce; camphor, 3 drams. Mix and apply warm three times a day.

Ulcers.—These generally proceed from some external injury, such as a wound or a bruise; or they arise in consequence of inflammation or some other disease. There are several sorts, as healthy, irritable, indolent, inflamed, sloughing or gangrenous, and sinuous.

Causes.—Wounds, injuries, bruises, inflammations, abscesses, or the suppression of some accustomed evacuations.

Symptoms.—A running sore, with acrid humors; hardness of the edges around the sore, and difficulty of healing.

Treatment.—In the *healthy*, which secrete good matter, and look to be healing, though but slowly, poultice with white bread or linseed poultice, a day or two; then dress with the following: Olive oil, 16 ounces; yellow wax, 1 pound; yellow resin, 1 pound; Burgundy pitch, 1 pound; Venice turpentine, 3 ounces. Melt the wax, resin, and pitch together with the oil, over a slow fire. When mixed, take off the fire, and put in the turpentine; stir well, and strain whilst hot through a coarse cloth.

In the *irritable*, which are very sore and spread, use the same fomentation as prescribed for rupture; take a cooling purgative, and use the following wash: Nitric or muriatic acid, 50 drops; water, 1 quart. Mix, and wash the sore with this two or three times a day, and poultice a day or two with linseed whilst using it. Then dress with the following salve: Venice turpentine, 1 ounce; frankincense, 1 ounce; beeswax, 1 ounce; linseed oil, 1 ounce; black resin, 1 ounce; black pitch, 2 ounces. Melt together; when cold enough, add fresh butter (without salt) or lard, sufficient to make it soft enough to dress with; apply twice a day. When it begins to look healthy, dress with the yellow-wax ointment, as before recommended.

Vomiting.—This may arise from various causes, as excess in eating and drinking, foulness of the stomach, the acrimony of aliments, sudden stoppage of wounds, weakness of the stomach, etc.

Treatment.—When vomiting proceeds from foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought, therefore, to be promoted by drinking lukewarm water or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile tea. If vomiting proceed from weakness of the stomach, bitters will be of service. Peruvian bark

infused in wine or brandy, with as much rhubarb as will open the body gently, is an excellent remedy in this case. The diluted acid of vitriol is also a good medicine, and may be taken in the dose of fifteen or twenty drops, twice or thrice a day, in a glass of wine or water. It has been said that habitual vomitings are alleviated by making oysters a principal part of diet. A vomiting which proceeds from acidity of the stomach is relieved by alkaline purges. The best medicine is magnesia, a teaspoonful of which may be taken in a cupful of tea or a little milk, three or four times a day, or oftener, if necessary, to keep the body open. When vomiting proceeds from violent passions or affections of the mind, all evacuants must be carefully avoided. The patient in this case ought to be kept perfectly easy and quiet, to have the mind soothed, and to take some gentle cordial, as negus or a little brandy and water, to which a few drops of laudanum may be occasionally added.

When vomiting proceeds from spasmodic affections of the stomach, the application of a warm plaster to the pit of the stomach will afford relief. Any aromatic medicines may likewise be taken internally, as cinnamon or mint tea, wine with spices boiled in it, etc. The region of the stomach may be rubbed with ether, or, if that cannot be had, with strong brandy or other spirit. The belly should be fomented with warm water, or the patient immersed up to the breast in a warm bath. Saline draughts, taken in the act of effervescence, are of singular use in stopping a vomit, from whatever cause it may proceed. These draughts may be prepared by dissolving one dram of the salt of tartar in one and a half ounces of fresh lemon juice, and adding to it one ounce of peppermint water, the same quantity of simple cinnamon water, and a little white sugar. This draught must be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting is violent. As the least motion will bring on vomiting again, even after it has stopped, the patient ought to avoid all manner of action.

Warts.—The wart is an excrescence from the cutis or outer skin—a horny tumor formed upon it; it is not generally so painful as it is disagreeable and unsightly, coming nearly always upon the hands, or some other conspicuous place. The best treatment is to touch it with some caustic, or escharotic. Nitrate of silver is the most effectual, but this turns the skin black, which is in many cases very objectionable. Caustic potash will answer the purpose, so will acetic acid, if of extra strength, and nitric acid. The application should be made daily, and the

decayed part pared off, or cut with scissors. If it can be conveniently done, a ligature of silk tied tightly round the base of the wart will cause it to decay, and eventually drop off. Another simple method is to bind a leaf of a house leek upon it, from which you have removed the skin, for a few nights in succession, and the wart will disappear.

Wasting (*Emaciation—Atrophy*).—The rapid or gradual reduction of the size of the whole body, or of parts thereof, frequently comes on without any evident cause. It is seldom accompained by pain, difficulty of breathing, cough, or fever; but is usually attended with loss of appetite and impaired digestion, depression of spirits, and general languor.

Treatment.—This disease is very difficult of cure, and for its treatment we must endeavor to find out the cause, and, if possible, remove it. If occasioned by worms, these must be destroyed by appropriate medicines; if by excess of any kind, this must be wholly discontinued; if from a scrofulous disposition, tonic medicines must be resorted to; and in like manner the treatment will be the same with that of every other disease which it may either accompany or of which it may be the effect. The diet should be nutritious, generous, and such as is easy of digestion,—milk, calves'-feet jelly, &c. Regular walking exercise should be taken in the open air. The surface of the body should be well rubbed, and change of scene and sea-bathing may be resorted to. Of medicines, cod-liver oil is likely to prove the most effectual.

It often occurs, more particularly in children, that wasting takes place without derangement of any other process than that of nutrition. In these cases a teaspoonful of cod-liver oil two or three times a day may often be followed by very decided and permanent benefit.

Water Brash.—Water Brash consists in a discharge from the stomach, generally in the morning, of a thin, glairy fluid, sometimes insipid, often sweetish, and at other times sour. A burning heat or pain of the stomach attends it, and seems to cause the discharge. The amount thrown up varies from a spoonful to a pint or more. The complaint is caused by a poor innutritious diet, or by whatever causes the blood to become thin and watery.

Treatment.—Ten or fifteen drops of ammonia water, in half a tumblerful of cold water, will quiet the distress and stop the discharge. The best remedy for this discharge is the trisnitrate of bismuth, taken at meal times, three times a day, in thirty-grain doses. The tincture of nux vomica is good. The

blood should be restored by tonics of some preparation of iron, and the food should be nourishing and digestible.

Watery Eye.—If we look closely at the inner corner of the eyelids, we may perceive a little point at each, which is the opening of a duct that runs into the nose. These openings convey the tears from the eye; every time the eye is shut in winking, the fluid is forced into those pipes. Now, when either or both become so thickened as to be stopped up , the tears of necessity fall over the cheek; this is called a watery eye.

Treatment.—As the cause of this disease is most commonly inflammation, it may be relieved in its early stages by a plan directed towards the lessening of that inflammation, and the best is as follows: Free the bowels well with salts; repeat this in three days afterwards, and apply the following eye-water: Take of common water two ounces; sulphate of zinc, four grains; laudanum, half a dram; mix, and apply frequently. Cold must be strictly avoided. If the complaint be not removed by the adoption of this treatment, surgical assistance must be obtained immediately, for if the disease be allowed to proceed unchecked the consequence will be a far more serious and troublesome affection.

Weakness of the Eyes.—We give below some excellent washes for ordinary weakness of the eyes: Sulphate of copper, 15 grains; camphor, 4 grains; boiling water, 4 ounces. Mix; strain, and when cold, made up to four pints with water. Bathe the eye night and morning with a portion of the mixture: Or the following:—Spirit of mindererus, 1 ounce; rose water, 7 ounces. Mix, and use occasionally; or this: White vitriol, 10 grains; elder-flower water, 8 ounces. Mix, and apply as occasion may demand.

White Swelling.—This is a disease of one of the larger joints. It is mostly of a slow or chronic character, and occurs chiefly in the knee, although the elbow-joint, hip-joint, and even ankle-joint are not unfrequently the seat of it.

Causes.—This complaint may result from blows, falls, bruises, cold, fevers, and constitutional disorders.

Treatment.—Early attention to this disease will prevent in almost every case, its dreadful consequences. When the pain commences in the knee, a blister should be put on, and perfect rest strictly observed. If the pain continue after the blister be healed, not a moment should be lost in putting on a caustic issue. The mere application of caustic has been known to cure the disease, but it is indispensable that the patient should not stand a moment on the limb. Or, in the early stage

apply leeches and warm fomentations. If not reduced, put on a plaster made as follows: Reduce to a fine powder two ounces of gum-ammoniac; and then add as much vinegar of squills to it as will form it into a paste, and spread it on a piece of leather and apply.

Runnings of the Ear.—Delicate and scrofulous children are liable to a yellow discharge, which suddenly comes on, and is at first often stained with blood, and accompanied by feverishness and great pain in the parts. There is generally redness and swelling of the passages of the meatus, and inflammation of the surrounding skin. This may arise from an inflamed state of the membrane which lines the passages, or from an abscess formed beneath it, or between the cells of the bones of the mastoid process. The discharge may be caused by some foreign substance thrust into the ear.

Treatment.—For the purulent discharge from the ear, which is induced by this or any other cause, a lotion made with two drams of solution of chlorinated soda to six ounces of rose, or elder-flower water, should be injected, but not with any force. The best method is to let it flow into the ear, held so as to receive it fairly, from a small sponge saturated with the lotion.

Counter-irritation will sometimes have a good effect on purulent discharges from scrofula or other causes. A small blister behind the ear is the best application, but it should not be kept open for any length of time, or it will weaken the system too much. When the discharge is the result of active inflammation and is attended by febrile symptoms, a spare diet and aperients must be the treatment; but weakly scrofulous systems require a generous diet and tonic medicines.

Wax in the Ear.—When this substance becomes too hard, or accumulates too much, there will be a sense of contraction, with cracking or hissing noises, and generally deafness to a considerable extent. In this case the ear should be syringed with warm soap-suds, the instrument used being a proper one for the purpose, holding about four ounces, and having but a small tube or pipe which does not fill the whole passage, but allows the escape of the back-water, for catching which a hand-basin should be held close against the neck. As many as a dozen syringefuls may be injected at one time. A strong lotion should be put into the ear-passage over night, and kept there by means of cotton wool or wadding. Almond-oil and laudanum, in the proportion of two ounces of the former to one of the latter, is a good application in this case, as in many other kinds of ear-disease.

Worms.—Worms are parasitical animals which infest the intestinal canal.

Although adults are subject to this complaint, it is most common in children.

Symptoms.—Fetid breath, grinding of the teeth during sleep, picking the nose, paleness of the face, acid eructations, swelling of a portion of the belly, which is there hard and tender; gripings, variable appetite, great irritability and itching of the lower parts of the body; short, dry cough; emaciation, slow fever, increasing toward night; irregular pulse, and liability to convulsions.

Treatment.—A dose of castor oil, exercise in the open air, wholesome diet, and a strict prohibition of uncooked fruit, and raw and green vegetables; salt to be taken with all the food eaten.

Any of the following remedies may be used, according to circumstances: Filings of tin, ½ an ounce; cassia confection, ½ an ounce. Mix. Take of the electuary a piece of the size of a nutmeg twice a day; after this has been continued for two or three days, take: Submuriate of mercury, 3 grains; powdered rhubarb, 10 grains. Mix, and take on the fourth morning after the preceding. Pound the leaves of tobacco with vinegar, and apply as a poultice to the stomach; Powdered jalap, 1 ounce; cream of tartar, 1 ounce; powdered ginger, ½ a dram; molasses sufficient to make an electuary. For a child, a very small teaspoonful at bedtime. Pour a pint of boiling water on one ounce of the leaves of the black hellebore, and, after it has cooled, give a dessertspoonful every four hours until it purges freely.

Inject into the bowels a half-pint of warm water to which has been added two drams of the tincture of sesquichloride of iron. If after the use of this injection there is much irritation, three or four of thin starch should be thrown up.

DISEASES OF WOMEN.

Women, in addition to the diseases incidental to both sexes, are subject, from their peculiar organization, to a number of distressing complaints; and, in many instances, through a mistaken sense of delicacy, their lives are shrouded in sadness and pain, from a want of proper information relating to their peculiar ailments. To women is entrusted a most sacred charge—the germ of a new being, whose position and usefulness in life will be greatly influenced by her prudence or indiscretion.

We shall treat, under various heads, the principal forms of disease and suffering that commonly affect the women of civilized life.

Menstruation.—The functions of the uterus, by which the menstrual, catamenial, or monthly discharges take place, generally commence between the fourteenth and sixteenth years of age, although we have known them to begin as early as eleven or twelve. A considerable period may elapse between the appearance of the first and second menstrual discharge; but, when they are properly established, their recurrence at regular periods may be calculated on with great certainty, unless some functional or other derangement of the system interferes with them. Ordinarily, a lunar month of twenty-eight days is the intervening period; but with some women the discharge occurs every third week. The fluid discharged resembles blood in color, but it does not coagulate. The quantity is from three to five ounces, and the process occupies from three to seven days.

The cause of this monthly flow is the ripening and expulsion of the egg from the ovaries.

"*Omne vivum ex ovo*," (every living thing comes from an egg or germ), is the universal law of reproduction. This can be shown as well in the vegetable as in the animal kingdom. The sturdy oak from the acorn, the ear of corn from the grain planted by the farmer, the robin and the elephant, all springing from germs, go to prove the truthfulness of this law. Every seed, every egg, contains a germ, which, when brought under proper influences, will produce of its own kind. Thus far all is

plain enough, but where do these germs originate? It has been ascertained that each animal, as well as each plant, is provided with an organ for the production and throwing off of these cells or germs. In the female, this organ is the ovary. The ovaries are two in number—small oval bodies, about one inch in length, a little more than half an inch in breadth, and a third of an inch in thickness. This measurement will differ in some cases, but will be found generally correct. Each ovary is attached to an angle of the womb, about one inch from its upper portion, by a ligament. The whole physiological function or duty of the ovary, is to mature and deposit its ova or eggs every twenty-eighth day, from the age of fifteen to that of forty-five, or for about thirty years. This function is suspended only during pregnancy and nursing, but sometimes not even then. There are numerous cases on record where the woman has had her courses regularly during the time she was pregnant, and there are many with whom lactation does not at all interfere. During the maturation or ripening, and discharging of the ovum into the canal or tube which conveys it into the womb, the generative organs become very much congested, looking almost as if inflamed. This congestion at last reaches such a height that it overflows, as it were, and produces a discharge of bloody fluid from the genitalia, or birth-place. As soon as the flow commences, the heat and aching in the region of the ovaries, and the weight and dragging sensation diminish and gradually disappear. Thus you will see that menstruation consists merely in the ripening and discharge of an ovum or egg, which, when not impregnated, is washed away by the menstrual fluid, or blood, poured out from the vessels on the inner surface of the womb. It will also be seen that a woman can become pregnant only at or near the time of her menses. The marvelous regularity of menstruation has always excited great wonder, but why should it? When we look around, we see that both animal and vegetable life have stated and regular times at which germ production takes place. Fruits and vegetables ripen, and animals produce their young at certain periods. It is a law of nature, and why should not woman obey it in her monthly term? Now, since we have shown that menstruation consists in the ripening and regular deposit of an egg—the flow being but the outward visible sign of such an act—it is possible that a woman may menstruate regularly without having any show. To prove this, there are many cases on record where a woman has married, and become pregnant without having had the least show, which would be impossible if she did not menstruate. Again, a

woman who has always been regular may have several children, without in the meantime having had any sign. This may be explained by her becoming pregnant during the time she was nursing her first child, carrying it to the full term, again becoming pregnant, and so on, until being no longer impregnated, her courses return, and are regular thereafter.

Menstruation commences at about the age of fourteen or fifteen in this country. In warmer climates it appears earlier, and in colder ones later. Menstruation, menses, courses, catamenia, monthly periods, and "being unwell," are some of the terms by which this function is designated. Those who are brought up and live luxuriously, and whose moral and physical training has been such as to make their nervous systems more susceptible, have their courses at a much earlier period than those who have been accustomed to coarse food and laborious employment. The appearance of the menses before the fourteenth year is regarded as unfortunate, indicating a premature development of the organs; while their postponement until after the sixteenth year is generally an evidence of weakness, or of some disorder of the generative apparatus. If, however, the person has good health, and all her functions are regular; if her spirits are not clouded, nor her mind dull and weak, it should not be considered necessary to interfere to bring them on, for irreparable injury may be done. The first appearances of the menses is generally preceded by the following symptoms: Headache, heaviness, languor, pains in the back, loins, and down the thighs, and an indisposition to exertion. There is a peculiar dark tint of the countenance, particularly under the eyes, and occasionally uneasiness and a sense of constriction in the throat. The perpiration has often a faint or sickly odor, and the smell of the breath is peculiar. The breasts are enlarged and tender. The appetite is fastidious and capricious, and digestion is impaired. These symptoms continue one, two, or three days, and subside as the menses appear. The menses continue three, five, or seven days, according to the peculiar constitution of the woman. The quantity discharged varies in different individuals. Some are obliged to make but one change during the period, but they generally average from ten to fifteen.

It is during the menstrual period that the system, especially of young persons, is more susceptible to both mental and physical influences. Very much depends upon the regular and healthy action of the discharge, for to it woman owes her beauty and perfection. Great care should therefore be used to guard against any influences that may tend to derange the menses.

A sudden suppression is always dangerous; and among the causes which may produce it may be mentioned sudden frights, fits of anger, great anxiety, and powerful mental emotions. Excessive exertions of every kind, long walks or rides, especially over rough roads, dancing, frequent running up and down stairs, have a tendency not only to increase the discharge, but also to produce falling of the womb.

The quantity and duration of the emission varies greatly in different women, and unless the former is either very scanty or excessive, these do not appear important particulars; but the regular recurrence of the issue is important to health. This should be borne in mind, and due care taken not to suppress the discharge by exposure to cold or wet, or by violent exertion of any kind about the time when it may be expected. It is desirable that young females should be properly informed by their mothers, or those under whose care they are placed, of what may be expected at a certain age, or they may be alarmed at the first appearance of the menses, taking it to be some indication of a dangerous disease or injury, and, perhaps, by mental agitation, or a resort to strong medicines, do mischief to themselves.

Delayed or Obstructed Menstruation.—If the menses do not appear at the usual age, or for some years after, no alarm need be felt, provided there is no constitutional derangements which can be attributed to this cause. If the girl has not developed about the hips and breast, and feels not the changes peculiar to this period, it would be very injurious to attempt to force nature. If, however, she is fully developed, and her general health suffers, a course of treatment will be necessary.

Causes.—An undeveloped state of the germ-producing organs; an impoverished condition of the blood; habitual costiveness; or the womb may be closed, or hymen be imperforate.

Symptoms.—Discharges of blood will sometimes occur from the nose, mouth, and gums, or from the stomach and bowels. Nearly always there will be unnatural heats and flushings, headache, tendency to faint, and hysterical symptoms.

Treatment.—The patient must be very attentive to her diet and regimen. Much exercise should be taken in the open air. Avoid late hours, rich food, and exciting pursuits. If the retention proceed from costiveness or bad condition of the system, use the means directed under the several heads. If from a mechanical cause, a physician must be consulted. Where it results from defective action of the ovaries, give the following:—

Carbonate of Iron, 1 dram; Extract of Gentian, 1 dram. Mix and make into thirty pills. Dose, one pill two or three times a day.

Suppressed Menstruation (*Amenorrhœa*).—Suppression is the stoppage of the menses after they have been once established. It may be either acute or chronic.

Causes.—Sudden cold, wet feet during the flow, fear, strong emotions, anxiety, or any cause that affects the general health. Chronic suppression may result from the acute, or from defective nutrition of the organs; from the early termination of menstrual functions, or from the weakness occasioned by a profuse discharge of whites from the uterus.

Symptoms.—The symptoms usually present in a well-developed body are all those mentioned in delayed menstruation, in a more aggravated form. In chronic suppression, failure of the general health, loss of appetite, pains in the head, back, and side, and constipation, are the usual symptoms. At the regular periods when the menses ought to appear, there will be great excitability, and an aggravation of the above symptoms. With those of full habit, there will be a strong, bounding pulse, with acute pain in the head, back, and limbs; with the feeble and sickly extreme languor, tremblings, shiverings, and pale visage.

Treatment.—Care must be taken that pregnancy is not the cause of the stoppage, or the health may be seriously injured by treatment for their restoration. Where the flow has stopped suddenly from exposure, the patient must take warm diluent drinks, salient aperients, till the bowels are freely opened; have hot bran-poultices applied to the lower part of the abdomen; immerse the feet and legs in hot water, rendered stimulant by the addition of mustard. If the pain is extreme, take an opiate draught every four hours, and have a lavement, with one dram of turpentine and half a dram of tincture of opium thrown up. The patient must be kept as quiet as possible. If it can not be brought on, wait till the next period, and use the hip-bath a few days before the period. Every other night the bath should be made more stimulant by the addition of a little mustard; and on every occasion, active friction with dry coarse towels should be used. A lavement containing two drams of spirits of turpentine may also be useful; and a leech or two applied to each thigh, on the upper part, as near the situation of the uterus as may be. Also give the following, which seldom fails if persisted in:—Barbadoes aloes, 1 dram; sulphate of iron, 1 dram; powdered cayenne, ½ dram; extract of gentian, ½ dram; simple syrup, sufficient quantity. Mix, and make into sixty pills. Dose, one pill night and morning.

The warm hip-bath should be used about the proper period of menstruation; and it would be well to give some uterine stimulant, such as a mixture composed of spirits of turpentine, made into an emulsion with yolk of an egg, sugar, and essence of juniper, about six drams of the first and one of the last, in a six-ounce mixture. One ounce to be taken three times a day. Attempts to promote the discharge in any case must not be prolonged much beyond the menstrual periods, between which all possible means must be taken to strengthen the system,—good diet, plenty of active exercise, the use of the shower-bath, or cold or tepid sponging; steel mixture, with aloes and iodine, in one or other of its forms, are the proper remedies.

If the amenorrhœa proceeds from a want of energy in the uterine organs to secrete the red discharge, as is often the case after frequent miscarriages, child-bearing, or inflammation of the womb, as well as after leucorrhœa, or "whites," there will probably be the usual signs of menstruation, followed by a white discharge only, and accompanied by acute pain at the bottom of the back, vertigo, and hysteria. Weakly young women, before accession of the menses, and elderly ones, at the time of cessation, or "change of life," as it is commonly called, are often so affected. In such a case we should prescribe hot baths and tepid injections, pills of sulphate of iron and aloes, with balsam of copaiba, ten or twenty drops in milk, three times a day; or powdered cubebs, from a scruple to half a dram; good diet and a recumbent position as much as possible during the periods. If the patient is of a full habit, apply leeches, ten or twelve over the sacrum, to be followed by a blister, with restricted diet, and, for a time, avoidance of sexual intercouse.

Painful Menstruation, (*Dysmenorrhœa*).—This is the rule with some females, but the exception with most. It does not seem to be in any way connected with the quantity of the discharge, and it may attend both the secretion and the emission; or but one or other of the processes, and but partially, coming on in paroxysms, or continually. during the whole process. The matter discharged is often thick and membraneous, and sometimes has in it clots and streaks of blood.

Treatment.—Use the warm hip-bath and friction; fomentation of the parts with warm water; diluent drinks, saline aperients, and a spare diet, must be followed; also, injection of warm water high up into the vagina; and take the following mixture:—Tincture of aconite-leaves, 2 drams; best spirits of nitre, 1 ounce; morphia, 3 grains; simple syrup, 4 ounces. Mix. Dose, one teaspoonful every half hour till relieved.

Profuse Menstruation (*Menorrhagia*).—This consists either in the too frequent return, or too long continuance of the periods; or in an excess of quantity during the natural periods; or in the character of the discharge being other than it should be, such as thick, fibrous, or bloody.

Causes.—This is in consequence of irritability of the uterine system, probably produced by over-exertion, luxurious living with insufficient exercise, or excesses of any kind; too rapid child-bearing, frequent miscarriages, or protracted lactation. The habitual use of tea and coffee will also produce it.

Symptoms.—It is generally accompanied by pain across the loins, great languor and debility, throbbing of the temples, headache, and vertigo. When there is much hemorrhage, there is an aggravation of these symptoms, sometimes followed by dropsy of the cellular tissue.

Treatment.—In persons of full habit, where the menses are not bloody, the following may be taken:—Sulphate of iron, 12 grains; dilute sulphuric acid, 1 dram; sulphate of magnesia, 6 drams; cinnamon-water, 12 ounces. Mix. Take two tablespoonfuls three times a day. If there is much pain, add tincture of henbane, two drams; or compound infusion of roses may be taken, with sulphate of magnesia; or ten or fifteen drops of the muriated tincture of iron in water, with or without the salts, as the bowels may require, two or three times a day. Sponge the loins and pubenda with vinegar and water, use the hip-bath, but let it be cold water, with a little salt in it, to strenthen the system as much as possible, and avoid all enervating influences. If there is blood in the discharge, use cold vaginal injections, with alum and opium in them, or the latter with gallic acid, about a dram of each to a quart of water. Apply hot bran-poultices to the breasts; keep the feet warm, but let the loins be lightly covered; take gentle exercise, bitter ale, and tonics, especially iron.

Cessation of Menstruation.—As the accession of the menses shows when the womb is in a fit state for conception, so then, cessation gives notice that the period of child-bearing is past. With females of our age and country they commonly continue up to the age of from forty to fifty; sometimes they cease at about thirty-five, and in a few instances have been known to continue up to the age of sixty. This cessation marks what is commonly termed the turn or change of life in women, and with those of average health it occasions little or no disturbance of the general system. There may be flushings of the face, and a sense of fullness in the head, with occasional giddi-

ness; but with those who are weakly and nervous, or suffering under any organic disease, we generally see a marked change at this period,—it may be for the better or worse, according to circumstances. With most persons the stoppage of the menses is a gradual process,—the quantity decreases, or the intervals become protracted, and it is probably superseded by a white discharge, which also will by and by disappear; with some the cessation is sudden and complete.

Women generally consider this an eventful period of their lives, and attribute all sorts of wonderful effects to it; but we can not learn that a sickly constitution was ever renovated at this time, or a strong one ever broken down in consequence of the change; indeed, fewer women than men die at the age when it usually takes place. Diseases of the genital organs, and of the breasts, which are sympathetically associated with them, require special attention at this time, as they are likely to be stimulated into activity. When there are no complications of disease connected with the change, little or no medical treatment is required. It is best to observe an abstemious diet, and to keep the bowels moderately open with rhubarb or colocynth pills; powdered aloes, with canella, commonly called hiera picra, is a popular opening medicine, and as good as any for such an occasion, except the patient be of a very full habit, in which case it should be a saline aperient like the following: Dissolve two ounces of epsom salts in a pint of warm water, add one dram of essence of peppermint, and take a wineglassful every morning, or twice a day if required. If there is flatulency or hysteria, add to each dose twenty drops of the fœtid spirits of ammonia, or the same of ether.

Herbal, or Eclectic Treatment for Menstrual Disorders.—The general treatment is the same as before mentioned. On the first appearances of the menses, let the greatest care be exercised over the health; let nothing check the natural flow. Colds taken at this time are very dangerous, and may result in delicate health, barrenness, and even death.

For suppressed menstruation, as soon as possible use the tepid foot-bath. At the same time sit over a vessel of warm water, in which has been boiled some bitter herbs, till a profuse perspiration is produced. Then retire to a warm bed, and take every hour or two a teacupful of warm tea made from the root of bervine. If this is not successful, give a little pulverized mandrake-root, with a little cream of tartar, on an empty stomach; after which pennyroyal or motherwort tea may be drank freely. If much pain is felt, apply fomentations of bitter herbs to the

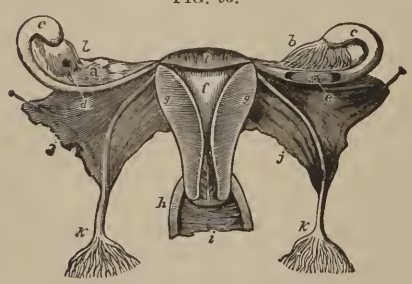
region of the womb, or a heated brick may be placed over the bowels. For profuse menstruation, the patient should assume the recumbent position, with the hips elevated as much as possible, on a hard bed, in a cool room. Bathe well the lower part of the abdomen with cold water or vinegar. From thirty to forty drops of elixir of vitrol may be taken, in a glass of water, two or three times a day; or ten to fifteen drops of the tincture of steel given in the same manner. The following has been highly recommended:—

Take equal parts of red-alder bark, yarrow, mullen and crowfoot, and half the quantity of beth-root; make into a tea; when cold drink a teacupful every three or four hours. If faintness be felt, take a few drops of lavender or spirits of hartshorn in a little cold water.

In painful menstruation, great benefit is received from the use of the warm bath; and apply hot water in bottles to the whole surface of the abdomen, with hot bricks to the feet; or apply a hot poultice or fomentation of hops, tansy, or boneset, and take the following:—Pulverized camphor, 25 grains; macrotin, 25 grains; ipecac, 25 grains; cayenne, 12 grains; opium, 12 grains. Mix, and make into twenty-four pills, with extract of hyoscyamus, and take one pill every two, three, or four hours, according to the urgency of the case.

The Womb.—This most important organ in woman is situated in the cavity of the pelvis,—from whence, when distended in pregnancy, it rises into the abdomen, with the general lining membrane of which and the pelvis, called the peritoneum, it is covered. It is of a flattened pear-shape, and is held in its place by elastic ligaments. In it unimpregnated state it is about three inches in length by two in breadth across the broadest part, and one in thickness. At the period of puberty it weighs about one and a half ounces; after parturition, from two to three ounces; and in the ninth month of utero-gestation, from two to four pounds. It is supplied with glands, vessels, and nerves, the latter of which constitute an extensive net-work over its entire surface.

FIG. 95.



THE WOMB AND ITS APPENDAGES.

a, Right Ovary; *b*, *b*, the Fimbriæ; *c*, *c*, the Fallopian Tubes; *d*, an Ovum being grasped by the Fimbriæ; *e*, an Ovum decending the Fallopian Tube to the Womb; *f*, Cavity of the Womb; *g*, *g*, Walls of the Womb; *h*, Wall of the Vagina; *k*, *k*, Ligaments of the Organs.

The ovaries are two in number—one on each side of the uterus, in the groin. They are nearly as large as the male testicles, and perform a corresponding function. When the germ (or ovum) has been perfected in the ovary, it is cast out, and seized by the extremity of one of the fallopian tubes, through which it is conducted to the uterus.

Falling of the Womb (*Prolapsus Uteri*).—*Prolapsus Uteri* is the falling of the womb from the weakening of its membraneous supports and the pressure of the viscera above generally increased by tight lacing, the pressure of the clothing, sustained by the abdomen and adding to its weight upon the uterus, and by the pressure of a load of fæces in the constipated rectum, and the daily efforts to expel them. These causes, all acting together, press the uterus down the vagina until it sometimes comes out externally. As nearly all women are exposed to some of these causes of falling of the womb, nine in ten have more or less of it. Even young girls, eighteen to twenty years old, have falling of the womb. Very few entirely escape it, for very few women are entirely well.

Treatment.—Avoid tight corsets and heavy skirts; suspend the undergarments from the shoulders, and not from the waist, as is usually done; avoid fatigue, and lie down as much as possible; use the cold hip-bath once or twice a day, and eject cold water into the vagina with a syringe; use plain vegetable diet, and avoid tea and coffee, spirituous drinks, etc. If the womb has descended to the external orifice, it is often necessary to restore it to its natural situation by pressing it upward and backward by a finger or two passed into the vagina. If there be any pain in this operation, the vagina should be well washed by injections of thick flaxseed or slippery-elm bark tea for a day or two before the astringent washes are used.

When the womb has passed completely out of the vagina, which is always drawn down and inverted, the parts sometimes become suddenly so swelled that it would be impossible, as well as improper, to return them at once. The inflammation is to be reduced by leeches, ice-water, or warm fomenting poultices of bread and milk, or hops and flaxseed, continually applied until the swelling and pain subside: then, with the hand well oiled, and the patient's hips well elevated upon a cushion or pillow at the edge of the bed, the organ is to be passed carefully within the vagina, and restored to its natural situation. The bowels and bladder must be regularly evacuated; but the patient should not be allowed to rise for several days, and should even then assume the upright position very gradually

and cautiously, after having used injections composed of the following ingredients:—

Take one dram of alum, and dissolve it in half a pint of clear water; or, half an ounce of the inner bark of the black oak, with three gills of water; boil down to a pint and strain. Two ounces of either of these preparations should be injected into the vagina by means of a vagina-syringe. This operation should be repeated twice a day, for a week or more,—the syringe being always well lubricated with lard or oil, that it may be introduced without difficulty or pain.

If there is much sensibility, use from thirty to forty drops of laudanum in the injection, and repeat the operation daily till it is removed. If there are frequent relapses, a pessary must be worn.

The womb is also liable to fall either backwards (*Retroversion*) or forwards (*Anteversion*), but the treatment of these conditions must be confided to an experienced physician.

Inflammation of the Ovaries (*Ovaritis*).—This disease is characterized by pain, heat, swelling, perhaps redness, in one or both groins. It is to be treated as any other inflammation—sitz-baths, with rest, and a strict diet. The bowels must be occasionally opened by a gentle aperient, as castor-oil. Injections of tincture of belladonna and hyoscyamus are very useful and soothing.

Inflammation of the Womb.—The treatment is the same, with the addition of injections, both to the rectum and vagina, cold if they can be borne, or with the chill off.

The ovaries, uterus, and fallopian tubes are so closely connected in situation and function, that they are generally inflamed together. The cause may be weakness, causing a local determination of some general disturbance, such as cold or irritation of these organs. It usually follows childbirth, abortions, or excessive and violent sexual intercourse.

Ulceration of the Neck of the Womb.—Ulceration of the neck of the womb is produced by corroding discharges and the irritation of continual sexual intercourse. It is readily cured by abstinence, vaginal injections, and direct application to the parts of a strong solution of nitrate of silver once in five or six days; or the ulcers touched with solid nitrate of silver once in five days.

Flooding (*Uterine Hemorrhage*).—This commonly occurs after abortion, in the puerperal stage of the labor, or it may be occasioned by disease of the womb. Immoderate flow of the menses is also called flooding, and to this some women are very

subject. It is extremely weakening to the system, and should be checked as soon as possible.

Treatment.—The best treatment is perfect quiet, and astringent and tonic medicines like the following:—Tincture of the sesquichloride of iron, 2 drams; infusion of quassia, 6 drams. Mix, and take a tablespoonful every four hours. If there is much pain and irritation, add tincture of conium, or hyoscyamus, two drams. Should this not have the desired effect, consult a medical man, as there may be disease of the womb.

Polypus of the Womb.—When a woman has been wasting away for some time, under a more or less copius discharge of blood, and the remedies recommended under the head of flooding, have been faithfully but unsuccessfully used,—when, during this time, she has remained free from burning and pain in the part, but has merely complained of a sense of weight in the womb,—there is great reason to suppose that she has a polypus excrescence growing there, and the best advice should be at once procured.

Cancer of the Womb.—*Symptoms.*—A sudden pain which shoots through the bottom of the abdomen, and either disappears entirely, or leaves after it a dull aching or a gnawing sensation, accompanied by more or less discharge of a fluid, which is sometimes pale and thin, but soon becomes thicker, yellower, perhaps streaked with blood, and very offensive. This pain is gradually rendered more severe and almost constant, and an exhausting hemorrhage sets in at times, perhaps continuing until checked by fainting. In other cases, a burning heat, followed by a fœtid discharge of matter mixed with streaks or spots of blood.

Treatment.—Cleanliness, fresh air, plain nutritious diet, regulation of the bowels, and tranquility of mind, are all that can be recommended in a work like this. The woman who has the misfortune to be visited with this affection, must resolutely determine to retire early from the active duties of life, and be content to abstain from indulgences which would heat the system, excite her passions, and increase the circulation of blood. Bland, soothing nourishment, and local applications, are all that can be administered until she can have judicious and experienced medical assistance. Her bowels should be kept open by the mildest laxatives that will affect the object; the fœtid and erosive discharges should be washed away by injection of flax-seed tea, castile-soapsuds, or a solution of chloride of lime or soda, with a little hop or camomile tea. When the hemorrhage becomes very profuse, the vagina should be plugged up with a fine

sponge or a strip of soft cotton or linen rag, imbued with strong alum-water. Formidable as the last two diseases are, they are not always beyond the reach of surgery.

Whites (*Leucorrhœa*).—There is no disease so common among women as this complaint. Few married women, particularly if they are mothers, escape its attacks. Very generally this troublesome discharge is associated with general debility, especially if it has continued profuse for any length of time. Hence it is very desirable that attention should be paid to it at the commencement; for, if neglected, it may seriously impair the constitution, and grow from a comparatively mild affection into an inveterate and dangerous disease.

Causes.—Over-exertion of the uterine organs, irritation of the rectum from loaded and constipated bowels. It may also be brought on by diarrhœa, piles, worms, irritation of the bladder or of the nervous system, excessive sexual intercourse, miscarriage, abortion, and displacement of the womb. Weakness, too, is a cause of *fluor albus*, as well as a consequence of its long continuance; confinement in a warm atmosphere, luxurious living, and chlorosis must likewise be numbered among its exciting causes.

Symptoms.—This disease may be distinguished from gonorrhœa by the absence of local irritation and swelling of the external parts, and the glands of the groin; also by the discharge being less regular and copious. In leucorrhœa this is commonly at first white and pellucid, or it may be opaque and thick, coming away now and then in lumps. After awhile the color will perhaps change to green, yellow, or brown, and sometimes it will become very acrid, causing abrasion and smarting on passing the urine. In this stage it is apt, especially during pregnancy, to cause a gleety discharge from the urethra of one having sexual intercourse with the patient. Ere long, if the disease is not checked, we get great local irritation and constitutional disturbances: there will be costive bowels, pains in the loins and back, great lassitude, with nervous and hysterical affections. Menstruation, too, will be irregular, at one time being altogether suspended, and at another too abundant.

Treatment.—If the patient is of full habit, saline aperients should be taken, and a spare diet observed; local ablutions should be practised three or four times a day, using occasionally a decoction of poppies for the purpose; the hip-bath, and an injection of goulard water, with a scruple of powdered opium in each pint, will also be found serviceable. The recumbent position should be preserved as much as possible, and the parts kept cool.

The practice of wrapping them up is objectionable, as it heats and weakens them. Local treatment will be of little avail in cases of long standing, unless the general health be attended to. To keep the bowels gently open, take five grains compound rhubarb pill, as often as required; and to strengthen and cool the system the following mixture:—Sulphate of iron, 12 grains; diluted sulphuric acid, 1 dram; sulphate of magnesia, 3 drams; cinnamon-water, 12 ounces. Mix, and take two tablespoonfuls two or three times a day. In obstinate cases, there should be an injection into the vagina of a solution of alum and sulphate of zinc, three drams of the former to one of the latter to a pint of water; three or four ounces to be thrown up while the patient lies with the hips rather elevated; this position to be retained for some time, with the parts covered by a cloth or sponge, so that the fluid may be kept in. If there is itching and irritation of the parts, it may be allayed by an injection composed of carbonate of soda, two drams, in a quart of bran tea. If the simple alum and zinc injection proves ineffectual, add a dram of powdered catechu to each pint, or use decoction of oak-bark as a vehicle for the above salts. When there is much debility, with suppressed or scanty menstruation, preparations of iron (as the above mixture) with compound steel pills, or some compound of Canada balsam, three grains, and a half-grain of quinine; or a half-dram of quinine with one dram dilute sulphuric acid, in six ounces of gentian or cascarilla; a tablespoonful to be taken two or three times a day. Should there be profuse menstruation, nothing is so likely to be effectual as the iron and acid mixture, with or without the sulphate of magnesia, according to the state of the bowels. Mustard poultices to the lower part of the back, or stimulant liniments, rubbed well in every night, for a time, will often prove useful.

Women who are likely to have leucorrhœa should avoid all predisposing causes of the disease, such as wines and other stimulants, and hot tea and other slops taken in large quantities; luxurious living, and sensual indulgences of all kinds, especially much sexual intercourse, and anything which has a tendency to enervate and enfeeble the frame. Early rising and regular open-air exercise, warm and comfortable clothing, good food and tonic medicine, with use of the shower-bath and bathing,—these will prove the best preventives.

Herbal, or Eclectic Treatment for Womb Diseases.—For the whites, care must be taken not to arrest the discharge too soon, or bad consequences may ensue. Use every means to improve the general health. Avoid hot rooms, excessive exertion, and

strong tea and coffee. A decoction of the roots of comfrey-root, boiled in milk, is highly recommended. Take a teacupful three or four times a day. Injections of alum-water or decoction of oak-bark, are very good. A preparation of one ounce of tincture of aloes, and two drams of muriated tincture of iron, well mixed, and forty drops taken three times a day in a little water, has been found of great advantage.

For falling of the womb, an infusion of white-oak bark, or an infusion of equal parts of peach-leaves, Solomon's seal, and hops, as an injection, will produce excellent results. Where heat and difficulty in making water exists, give a drink of infusion of marshmallow and spearment.

Pregnancy.—Utero-gestation, or the period of child-bearing,—that is from the time of conception to that of delivery,—extends over a period of forty weeks, or two hundred and eighty days. It is commonly set down as nine calender months, but this would make only two hundred and seventy-five days; or, if February be included, two hundred and seventy-two days; that is, thirty-nine weeks only, instead of forty, or nine calender months and a week. In making the necessary provision for the coming on of labor, it is best to calculate from midway between the last occurrence of menstruation and the one which would have followed if conception had not taken place, and allow nine calender months from that time. Thus, if menstruation had taken place on the first of January, labor might be expected some time about the middle of October.

The Signs of Pregnancy.—The chief signs of pregnancy are as follows:—

1. The cessation of the menses,—although this is by no means an unfailing sign, for sometimes this discharge will cease from other causes, and sometimes it will continue after conception has taken place.

2. Morning sickness, which generally commences about the fourth or fifth week, and lasts to about the fourth month. With some this is but slight, and causes but little inconvenience; but with others it is more continuous and serious, sometimes causing the rejection of nearly all food for a very considerable period. This symptom, again, cannot be taken as a proof of pregnancy: it is merely a suspicious circumstance, to be watched in connection with others.

3. Enlargement of the breasts, which generally increase in size about two months after conception. They also become tender and sore; they throb and burn, and, when pressed by the hand, have a hard knotty feel, in consequence of the swell-

ing of the glands by which the lacteal fluid is secreted. The nipple, also, becomes more prominent, and increases in diameter, while the areola around it assumes a purplish tinge, and has on it several little raised pimples of a yellowish-white color.

4. Enlargement of the womb and abdomen, which, in the fourth month, becomes very perceptible,—the womb, which may now be felt in a firm rounded body, having ascended above the bone of the pubes, and pushed the bowels up into the abdomen.

5. A tendency to flatulent distension of the stomach, towards evening especially, rendering insupportable a pressure of stays, &c., which in the morning could be easily borne.

6. "Quickening," which is the mother's first perception of the second life within her. There is at first, probably a very slight tremulous motion, like a mere pulsation. This, day by day grows stronger, until it becomes quite distinct, often painfully so. It is as though the child, to use a scripture phrase, "leaped in the womb." These movements can be distinctly felt by the hand placed upon the abdomen.

There are other and less obvious signs, which only the professional man would be likely to detect. All may notice, however, the change which generally takes place in the countenance. The mouth and eyes seem to enlarge, and the nose becomes what is generally termed more or less "pinched up." There is an alteration, too, in the color of the eyes, which become somewhat paler,—especially is this perceptible if they are blue eyes. Then the patient is generally fidgety, peevish and restless, exhibiting a high degree of nervous irritation; she has odd fancies, and longings after out-of-the-way things and articles of diet, which should be procured for her if possible. At such a time she requires soothing and humoring; harsh snd unkind treatment will be likely to have a most injurious effect, both upon her and her offspring.

Management and Conduct of Mothers during Pregnancy.—A pregnant woman should be made aware that the advantages obtained by well-regulated habits are by no means exclusively conferred on her, but that others equally important are likewise conferred on the child, for whom a larger supply of nutrition, and of a better quality, will thus be provided; and so being nourished by sound and healthy fluids, will commence its career of life strong, vigorous, and less liable to those morbid debilities and derangements which affect the children of the indolent, the pampered, or the debauched.

From the moment, therefore, that conception has taken

place, a new and most sacred duty devolves upon the female. She is bound by all the ties of maternal sentiment, of humanity, and of moral and religious obligations, to protect the nascent being in her womb against every circumstance, under her control, which might have an unfavorable influence on its delicate organization.

The state of pregnancy is one peculiarly liable to disease and injury; and we daily witness much suffering and danger incurred both to the mother and the child, from the influence of causes which, with proper care, might have been avoided altogether, or, at least, rendered inoffensive.

Diet during Pregnancy.—The peculiar tendency to febrile irritation and general plethora, in pregnancy, renders it especially proper to avoid undue excitement and nourishment during this period. Not that the pregnant female is to be dieted like a valetudinarian; but that moderation and simplicity of food is especially proper in her case. As the appetite is frequently very craving during this period, an inordinate indulgence in rich and high-seasoned food is among the most common errors; and this mistake is the more readily fallen into from the erroneous idea which many entertain, that, as the fœtus draws its nourishment from the maternal system, a greater quantity of aliment is required in pregnancy. The exercise of caution in the selection of proper food, appears to be particulary important towards the termination of gestation. When the stomach is in a weak and irritable state, rice, barley, arrow-root, oat-meal, the lean part of mutton, tender beef, soft-boiled eggs, and stewed apples constitute appropriate articles of nourishment. But it is always to be recollected, that the temperate use of food is of more consequence than any very cautious selection as to its kind. Coffee and tea may be moderately used; but all vinous or alcoholic drinks should be studiously avoided. The temptation to indulging in small portions of cordial, or brandy, in the early months of gestation, is often very strong; but it ought to be firmly checked, or the deplorable habit of solitary dram-drinking may be the result of indulgence in these potent stimuli.

The appetitive sensibilities of the stomach, in some instances, undergo extraordinary derangement, especially in weak and delicate females. Articles of food which, previous to pregnancy, were very grateful and congenial, become highly disagreeable, and an almost irresistible craving for singular and even disgusting substances, is experienced. This remarkable irregularity of the appetite is usually called *a longing*. If the substances

longed for be not evidently of an injurious character, they should not be withheld; in some instances, these longings may be regarded as instinctive calls of the stomach for articles favorable to the health of the individual. Thus, when a strong desire for eating chalk, charcoal, or clay, is manifested, we are admonished that the digestive powers are feeble and that there is a tendency to acidity in the stomach. In such cases the means of relief are alkalines, mild laxatives, and tonic vegetable bitters, with a suitable regimen.

Dress and Exercise.—The custom of wearing tightly-laced corsets during gestation can not be too severely censured. It gives rise to functional disorder of the stomach and liver, as well as to uterine hemorrhage and abortion in the mother; it likewise impedes the regular nourishment of the fœtus in the womb. The clothing should always be sufficient to protect the body against the injurious influence of cold and atmospheric vicissitudes: the abdomen and feet especially should be guarded against injury from these causes. In winter, or cold and damp seasons, the use of a flannel bandage or roller around the abdomen will be found very beneficial and comfortable. All kinds of agitating exercise, such as riding in carriages with rapidity over rough roads, dancing, lifting or carrying heavy loads,—in short, all masculine and fatiguing employments whatever, ought to be avoided by pregnant women; and the more so as gestation approaches the term of its regular completion. During the eighth and ninth months of pregnancy unusual exertion or fatigue is particularly apt to excite premature labor. It is to be observed, however, that if injury is apt to result from too much exercise, injurious consequences may also arise from too much indolence and inactivity. Riding in an easy carriage on even roads, or moderate walking, may be enjoyed with great propriety, and usually with obvious advantage during gestation.

Moral Influences.—Tranquility and cheerfulness of mind are of prime importance during pregnancy. Convulsions, severe hysteria, spasms, syncope, hemorrhage, and abortion, may be produced by violent anger, terror, or jealousy, during pregnancy. Intense grief will occasion debility, indigestion, jaundice, and various other functional disorders. A strong excitement of the imagination is supposed by some to be capable of producing impressions on the fœtus in the womb.

The Breasts.—The breasts and nipples should be particularly attended to during the latter months of gestation, in order to prepare them for suckling the infant. For some weeks before the expected termination of gestation, the nipples should

be daily washed with lukewarm water, then dried by exposing them to the free air, and afterwards gently rubbed for five or six minutes with a soft piece of flannel, or with the extremities of the fingers. When the skin of the nipples is very delicate and sensitive, they may be washed with brandy and water, or a wash composed of two drams of the tincture of myrrh, one dram of laudanum, and two ounces of water. In using this, the nipples should be first bathed with lukewarm water, and dried and rubbed as before directed, and then washed with the lotion. Compression of the breasts by corsets, or any other artificial means, is carefully to be avoided. When the nipples are very small, or sunk in the breasts, they should be drawn out by means of a suction-pump with a common clay tobacco-pipe. This process should be repeated several times daily, until they have acquired a sufficient degree of prominency.

Diseases of Pregnancy.—(*Morning Sickness.*)—This complaint is sometimes very troublesome and obstinate.

Treatment.—The patient should have breakfast in bed, and remain in a recumbent position for some time after. Small lumps of ice put into the mouth and allowed to dissolve, will sometimes give relief. Give, if the sickness is troublesome, three times a day, a mixture composed of one scruple of bicarbonate of potash or soda, dissolved in a wineglass of water. Take, while effervescing, with a tablespoonful of lemon-juice.

Constipation.—During the latter months of pregnancy, constipation is nearly always present, the pressure upon the lower bowel being the cause. Neither aloes nor any violent cathartic should be taken. A moderate dose of castor-oil may be administered about every other day, or as often as necessary; but if the stomach nauseates at repeated doses of this, try the following mixture:—Sulphate of magnesia, 1 ounce; infusion of roses, 6 ounces; cinnamon water, 2 ounces. Dose, a wineglassful every morning early. If, as is sometimes the case, diarrhœa supervenes, give the following:—Chalk mixture, 6 ounces; aromatic confection, 2 drams; tincture of opium, ½ dram. Dose, a tablespoonful every three or four hours.

Heartburn.—This may be removed by moving the bowels with a little magnesia, and taking a wineglassful of lime-water in milk two or three times a day; or carbonate of potash and magnesia, of each ten grains, in cinnamon-water, with one dram of tincture of gentian.

Incontinence of Urine.—The frequent desire to make water, arising from irritation of the bladder, should be attended to, as long retention of urine may cause retroversion of the womb and

abortion. An abdominal belt will be found of great service in the renal affections of pregnancy. Effervescing draughts, with ten grains of nitrate of potash and the same of magnesia, will also be found serviceable; and if there is much pain, add five grains of laudanum, and apply hot fomentations or use the hip-bath.

Cough.—If there is cough, which frequently attends pregnancy, give any soothing pectoral mixture. If the cough is attended with pains in the chest, or headache, apply in the former case mustard-poultices over the sternum.

Varicose Veins.—For cramps and pains in the legs, with swelling and varicose veins, sponge the legs with cold vinegar and water, and put on roller bandages or elastic stockings, and rest in a recumbent position.

Itching of the Private Parts.—Itching about the vagina, with gleety discharges, call for the use of the hip-bath, and a slightly astringent injection, such as goulard water, a weak solution of alum, or an infusion of green tea.

Restlessness at Nights.—For dreams and restless nights, extract of hemlock, or henbane, five grains at bedtime, with strict attention to the condition of the bowels.

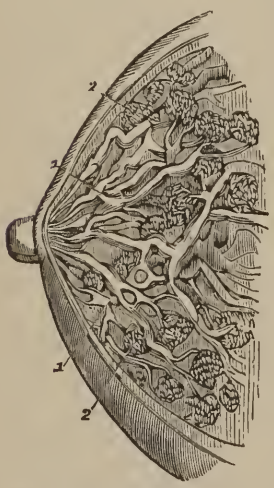
Melancholy, Despondency, etc.—Despondency frequently seizes upon those who are about to become mothers; but generally, if the health be pretty good, it is shaken off as the great trial approaches. There are some women who are never so well and cheerful as during the time of pregnancy, but many there are to whom it is indeed a period of trial and suffering; and especially is this the case with those who are about to become mothers for the first time.

False Pregnancy.—A condition of the female system of a remarkable kind, more frequently observed about the turn of life, when the catamenia becoming irregular, previous to their final cessation, are suppressed for a few periods; and, at the same time the stomach being out of order, nausea or vomiting is experienced, the breasts enlarge, become sensitive or even slightly painful, and sometimes a serous or acrolactescent fluid exudes from the nipples and orifices of the areolar tubercles; the abdomen grows fuller and more prominent, especially in women of full habit and constitutionally disposed to *embonpoint*, and the abdominal enlargement progressively increases, partly from deposition of fat in the integuments and in the omentum, but still more from distension of the intestines by flatus, which, passing from one part to another, communicates a sensation like that produced by the motion of a fœtus; the nervous system is gen-

erally much disturbed, and the woman feels convinced that she is pregnant, an idea which, at the time of life alluded to, is cherished by the sex with an extraordinary devotion, and relinguished with proportionate reluctance; and not unfrequently at the end of the supposed gestation, the delusion is rendered complete, and almost assumes the character of a reality, by the occurence of periodical pains strongly resembling labor.

The Breast.—We use this term in its restricted sense, as applied to the fleshy protuberance common to women, in which is situated the mammary glands, for the secretion of the milk by which the infant is nourished. Its full development depends greatly upon habit and constitution, being in some much more early in advancing womanhood, of which it is one of the most remarkable signs, and prominent in full maturity, than in others. In the earlier stages of pregnancy, its fullest development commences: the breast swells, and the nipple enlarges, and by, or near, the time of delivery it is filled with lacteal fluid, which passes readily, on suction, into the mouth of the child. Too frequently the proper enlargement of the breast, and increase of the nipple, is retarded by tight lacing. The consequences, sometimes, are hardened and congested states of the tissues, an insufficient supply of milk, or a failure of it altogether; or a nipple so flattened and pressed into the breast that it cannot be taken hold of by the mouth of the infant. Abscess, cancer, and other evil consequences may also ensue from undue pressure upon such tender parts.

FIG. 96.



SECTION OF MAMMARY GLAND.

1, 1, Galactophorous Ducts; 2, 2, Lobuli.

Inflammation of the Breast.—This affection is common, and frequently results in abscess. Various causes may produce it, such as a blow, exposure to cold or wet, great mental excitement, unnatural distension by an accumulation of milk, or too much pressure by corsets. It may occur at any period between early and advanced womanhood, but most commonly it does occur within a week or two of childbirth, and is the result of some obstruction in the flow of the milk, or change in its normal character. Such a change will be sure to occur if the milk is suffered to remain long in the breast; therefore, should the in-

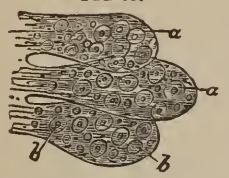
fant be unable to relieve it at all, or insufficiently, artificial means must be taken to do so.

FIG. 97.



ORIGIN OF THE MILK DUCTS.

FIG 98.



ULTIMATE FOLLICLES OF THE MAMMARY GLANDS.
a, *a*, the Secreting Cells; *b*, *b*, the Nuclei.

A simple and cheap form of breast-pump is made with a stout elastic bag with a glass mouthpiece, a wide-mouthed bottle sufficiently capacious to hold two quarts. This is dipped in hot water, and the mouth immediately applied to the breast; the heat will have rarefied the air within, which, as it cools, contracts and leaves a vacuum, causing suction, which draws the milk into the bottle. Some nurses have the art of drawing the breast with the mouth; and it is well to let them do so, as no instrument can effect the object so thoroughly.

Abscess in the Breast.—When there is an inflamed state of the tissues of the breast, there are shooting pains, and often febrile symptoms. The part will become hard and exhibit knotty protuberances, indicating the formation of an abscess. These symptoms will be succeeded by throbbing and a sensation of weight,—the skin gradually assuming a thin and red appearance, and becoming thinner until it finally breaks, and allows the escape of matter.

Treatment.—When the premonitory symptoms of mammary abscess are observed, recourse should at once be had to remedial measures. Let the breast be well yet gently rubbed with a soft hand, into the palm of which is poured fresh olive or almond oil; the friction should be continued for about ten minutes, and repeated every four hours or so. Goose-grease and other fatty substances are recommended, but simple oil is best, the friction being the principal agent for good. Between the intervals of this the breast should be kept covered with a tepid-water dressing,—having over it oiled silk to prevent evaporation. Care must be taken during this treatment to keep the bowels gently open, and to keep under the febrile symptoms. A mammary abscess will frequently continue discharging for a considerable period, and, during this time, the patient should be supported by a nourishing, although light diet.

A warm bread-poultice is best for the abscess; it should be changed about every four hours, and covered with oiled silk. When the discharge has nearly ceased, simple tepid-water dressings may be substituted. The breast, during all this time, should be supported by a soft handkerchief tied round the neck.

An application of collodion all over the part has sometimes been used; it forms a thin coat which, contracting as it dries, affords the necessary support, if the breast is not very large and heavy. If some amount of pressure is required, strips of strapping crossing each other will effect this object. After all danger of inflammation is over, a more generous diet may be allowed. Should the breast remain hard, friction with soap liniment should be resorted to. A dram of compound tincture of iodine to each ounce will render it more effectual.

Sore Nipples.—Very painful and distressing cases of sore nipples frequently occur after childbirth. Sometimes they cannot be avoided, but frequently they arise from too great an anxiety on the part of the mother, who is constantly meddling with them, applying the mouth of the child, and resorting to all sorts of expedients to draw them out. Nipple shields, with India-rubber teats, may be readily procured, and should be used when the nipples are too sore and tender to bear the application of the infant's mouth. In this case the milk must be drawn from the breast by one of the contrivances above mentioned, and given to the child in a feeding-bottle.

Glycerine has been found a good application for chapped or otherwise sore nipples. It must be applied with a camel-hair brush, first wiping the part dry with a soft piece of linen. If obtained pure, there will be little or no smell in it to annoy either mother or child. Collodion is also useful, but it causes considerable smarting. If, as is sometimes the case, there be suppuration, warm bread-poultices must be applied, and after them tepid-water dressing. Infants, a few days after birth, sometimes have the breasts distended with a thick, milky looking fluid; and youths just arriving at the age of puberty have hard and painful swellings about the nipples. In both cases warm fomentations only are required; the parts should not be pressed or rubbed; for the child, a little cold cream or simple ointment, after fomenting, is desirable.

Milk Fever.—An aggravated form of the excitement which takes place at the onset of lactation.

Causes.—The cause may be a cold, or over-heating the apartment, too stimulating a diet, or any obstruction to the flow of milk from the breast.

Symptoms.—Its first symptoms are increased heat of the system, preceded by shivering, and sometimes accompanied with vertigo and slight delirium. These are followed by severe headache, thirst, dry tongue, quick pulse, throbbing of the temples, and intolerance of light.

Treatment.—Spare diet, perfect tranquility, subdued light, cooling drinks, and saline aperient medicines; the head should be kept somewhat elevated, and bathed with cold water or evaporating lotions. If the symptoms should become worse in spite of this, apply half-a-dozen or more leeches to the head, and put the feet in a warm mustard bath. Most lying-in women have more or less of this fever, which is no doubt an effort of nature to rouse the hitherto dormant mammary organs to secrete a proper quantity of milk. If, however, it is not checked, the arterial region runs too high, and no milk at all is secreted.

Confinement (*Parturition*).—Every prudent woman who has the power of doing so, will make all necessary preparations for an approaching *accouchement*, as the French term childbirth, or delivery.

Few women who are near their confinement, are sufficiently cautious of exposing themselves to unnecessary fatigue and atmospheric changes. They will "keep about until the last," and it is well for them to do so, provided they take only gentle exercise, and avoid getting wet or chilled, or heated in crowded assemblies, and the like. Miscarriages, difficult labors, and frequently lasting injury to mother and child, if not the death of one or both, is not unfrequently the result of imprudence at this critical period. Therefore would we impress upon all our readers who are likely to become mothers, the duty which they owe to themselves, their friends, and their future offspring, of refraining, when *enceinte*, as much as possible from the more exciting pleasures and laborious occupations of life, and of preparing for the pains and cares which will shortly come upon them.

Let all the preparations for the little stranger be made in time, and the services of an experienced nurse engaged. Let the mother, or some female very near and dear, be at hand to aid and counsel, and, above all, to cheer and encourage the often sinking heart, not only at the actual period of the labor, but for some time previously. And let the mother in expectancy be treated with all possible love and gentleness. She may be fidgety and whimsical,—what of that?—provided they do not run into outrageous extremes, let her whims be indulged. She is frequently in a state of great nervous excitement,—her body may be racked with pain, and her mind unhinged. Let her be soothed and tenderly dealt with. She has got that to go through, at which the strongest man might well tremble, and shrink aghast.

We will suppose that the inevitable hour has come, and that the labor-pains are regular, and that the work of delivery

proceeds properly, although perhaps slowly. In due time—it may be in two hours, or four, or six, or even, in the case of a first child, twenty-four hours—the infant is born, and treated according to the directions given in the management of infants. But we are getting on too fast, and must go back to explain what has been, or what should have been, done to bring about the desired consummation of a safe delivery; and what is yet of more consequence, the safety of the mother and child, and the gradual recovery of the former from the shock which, under the most favorable circumstances, her system will receive. If she be a strong, healthy woman, and no unusual complications arise to disturb the natural process, but little aid or interference may be required. There will be the usual warning symptoms: intermitting pains in the back, slight at first, but increasing in intensity. There will probably be a slight discharge of mucus, stained with blood, and perhaps also a considerable discharge of a clear fluid, popularly called "the waters." This is an albuminous liquid filling up the membrane in which the fœtus floats, and so preventing pressure. It sometimes does not escape until labor has actually commenced by the falling down of the child into the pelvis. When this takes place, the recumbent position should be assumed. Previous to this, it is best for the patient to sit upright or walk gently about, and so assist the action of the uterus.

When the labor pains become very great, the patient should be placed on the bed, previously guarded by some waterproof material on her left side, and not far from the edge, so that needful assistance can be easily rendered. She should have a tightly-rolled pillow placed between her knees. If there is no unnatural obstruction to the delivery, it is best left to nature. Should the patient in the struggle become very faint and weak, a little brandy and water may be administered at short intervals, but this must be stopped as soon as the labor is over, or inflammatory action may ensue.

As soon as the child is born, and the umbilical cord,—or as it is commonly called, the navel-string,—by which it is attached to the womb, has been tied and cut (see on the management of new-born infants, page 301, a broad bandage or towel should be passed round the body of the mother, so as to cover the hips, drawn tightly, and pinned or tied, so as to sustain a pressure upon the womb, and stimulate the vessels to return to their normal condition. Before this is done, however, it will be best to pull that part of the above-named cord which remains attached to the uterus very gently, and by this means to accom-

plish if possible the removal of the placenta, commonly called the after-birth, which sometimes comes away with the child, or immediately after, and is sometimes only removed with the greatest difficulty. If, at the expiration of a couple of hours or so, this still remains in the womb, where it will cause irritation, the hand of the nurse or medical man, previously well oiled, must be carefully passed in, so as to grasp, and without breaking it, to detach it gently from its adhesion, and bring it away, waiting to complete the process until an after-pain comes on. Generally the natural expulsion, or artificial removal, of the placenta is attended with hemorrhage, sometimes to a frightful extent. For directions how to proceed in this case, see article on *Flooding*, page 491.

For at least six hours after labor, the patient should be disturbed as little as may be. We have seen fussy nurses very desirous of making "missus" comfortable, and begin to put things to rights about her, when she, poor soul! only wants perfect rest and quiet. Let her have it. And if the pulse is thin and feeble, and the cheeks are colorless, and the breathing scarcely noticeable, so that life seems almost ebbing away, put a little, very little, brandy and water, warm and sweet, between her lips now and then; but stop instantly if it produces flushing or restlessness; and do not give it at all unless there seems urgent necessity for a stimulant. At the expiration of the above time, if a revival has taken place, soiled bed-clothes and body-linen may be changed; but all this should be done very carefully and gently, or the fatigue may occasion a relapse. If the after-pains continue severe at the expiration of the above time, an anodyne draught may be given. It may be composed of from twenty to thirty grains of tincture of opium, or a quarter of a grain of morphine, in an ounce of plain or spearmint water.

For eight or more days after labor, the recumbent position should be strictly maintained; and the same rule holds good after a miscarriage. Some women feel so well and strong in a day or two, that they will sit up, and sometimes even get out of bed, and make themselves useful in the house. We have seen a woman at the wash-tub three days after she had been confined; and we have heard of females undergoing the pains of labor under a hedge by the roadside, and in a few hours proceeding on their journey with their babes at their breasts. But these women were semi or entire barbarians; they had not been delicately nurtured. With the immense advantages, we must also take some of the disadvantages of civilization, and those who give birth to children surrounded by all its comforts and

luxuries, must not attempt to emulate the Indian squaw. If they do, they will inevitably suffer for their temerity. Getting about too early after childbirth is, perhaps, the most fruitful of all sources of uterine disease. The consequences may or may not show themselves at once, but whether or no, bad consequences there most likely will be; therefore we warn all mothers to keep their beds long enough; but little exertion should be made until the end of the first fortnight. If there is a necessity for getting about earlier, of course it must be done, for necessity has no law; but unless there is, the risk should not be run. Delicate women especially do wrong to attempt it, and the strong will be likely to render themselves weak by the practice.

Abortion, or Miscarriage.—The premature expulsion of the fœtus from the womb,—that is, before the seventh month. After that period, if delivery occurs before the ninth month, it is called premature labor.

Causes.—A sudden shock to the system by a fall or a fright; straining, or over-reaching; the administration of strong purgatives or emetics; excessive indulgence in venery, or aught which may tend to debilitate the system; malformation of the generative organs; fevers and severe inflammations; syphilis or constitutional disease of any kind; the growth of polypi or tumors in the cavity of the uterns, or adhesion to the surrounding viscera; too great contractibility of the uterine fibres and blood-vessels. Most frequently, perhaps, it is a diseased condition of the fœtus itself, which, wanting the elements of growth and vitality, is rejected as a useless and troublesome incumbrance. Two classes of females, very different in constitution and appearance, are more than commonly liable to abortion, namely, those of a voluptuous and plethoric habit, and those of a weak and irritable frame. Those who continue to suckle after conception has again taken place, render themselves liable to it, because a certain amount of nutriment required by the fœtus goes to the formation of the lacteal fluid.

Miscarriage is generally attended with much pain. It weakens the system, and often severely tries the constitution of the sufferer, whose liability to the accident increases with each occurrence. The periods at which it is most likely to take place are said to be about a month after conception, again in twelve weeks, and again in the seventh month,—the liability increasing in those stages which correspond with the periods of menstruation. Some women invariably miscarry at a certain stage; and thus, although often in the way to become mothers, are never blessed with offspring.

By this it will be sufficiently plain that pregnant women ought to avoid all violent exercises of the body, strong mental excitement, over-indulgence of sensual appetites, exposure to wet, or any extremes of weather, or aught which may tend to constitutional derangement of whatever kind; and those who have once aborted should be doubly careful on account of their greater liability,

Symptoms.—These vary considerably, according to the more or less advanced stage of pregnancy, and state and condition of the patient; but usually she feels at first slight pains in the loins, and parts about the womb. There is a sense of bearing down, a frequent desire to make water, or to evacuate the bowels, and a feverish state of the system generally. A discharge of blood commonly follows, sometimes in clots, at others in gushes, at longer or shorter intervals; and this will continue until the fœtus is expelled. As the patient can not be considered out of danger until relieved of the ovum, the discharge ought to be carefully watched, and preserved for the examination of the medical man, should he not be present during its progress, which is much to be preferred.

Treatment.—The first object, when the premonitory symptoms above mentioned set in, is, if possible, to *prevent* abortion. To this end the patient should at once assume a recumbent position, and on no account be suffered to move more than may be absolutely necessary. For a few days, use only cold drinks, and at bedtime take a pill composed of one grain of opium and two grains of sugar of lead.

If there is much heat in the abdomen, cloths wet with vinegar and water, in equal proportions, should be applied thereto, and removed as often as they get warm. When the hemorrhage becomes at all profuse, all hopes of prevention are at an end, and the efforts should be directed to relieve pain, prevent exhaustion of strength, and finally to remove, as quickly as may be, the ovum from the womb. To effect the latter object, mechanical means are sometimes resorted to, but only one thoroughly acquainted with the anatomy of the parts should attempt this. As the flooding proceeds, the patient should be kept as cool as possible; she should be exposed to, and suffered to breathe, cold air; acidulated drinks should be administered; if ice can be obtained, let it be used to lower their temperature. Should fainting ensue from loss of blood, cordials may be given, but not hastily, or frequently; a teaspoonful of brandy, or fifteen drops of aromatic spirits of ammonia, in half a wineglassful of cold water, is the best stimulant for the purpose. When the

discharge is very profuse, lint, wadding, or a piece of sponge, dipped in a solution of alum, and then in olive-oil, may be introduced into the vagina, or an injection of the same gently thrown up by means of a syringe; or a decoction of oak-bark may be used for the same purpose.

Should these means fail to check the hemorrhage, make up eighteen grains of sugar of lead into twelve pills, with crumb of bread, and give one every two hours with a draught of vinegar and water, or dilute sulphuric acid, fifteen drops in half a wineglass of water being a sufficient dose. Opiates may be given with advantage when the pain is very severe, especially before the flooding comes on, or after it has continued too long. Suppositories, consisting of about a grain of powered opium, made up into a softish mass, with a few grains of powdered gum, or extract of henbane, are also useful. These latter may be introduced when miscarriage is likely to ensue. With rest and proper care they will sometimes prevent it.

The best preventives of miscarriage are the frequent use of the cold hip-bath, and sponging the lower part of the belly with cold vinegar and water; strict attention to diet, and avoiding all violent purging medicines; moderate gentle exercise, and entire abstinence from sexual intercourse during the first months of pregnancy.

We can say nothing here about abortions voluntarily produced, except to warn women of the folly and danger of resorting to unprincipled empirics, or the use of powerful drugs, to hide the consequences of an unlawful gratification of their passions. Death has frequently resulted from the employment of such means as are necessary to produce abortion, and far better is it to bear the shame and disgrace of being the mother of illegitimate offspring than to incur the risk and sin of being possibly the destroyer of self, as well as of the embryo of a human being, over which the parental instinct alone ought to stimulate to tender care and watchfulness.

Anæmia.—This is a condition of the constitution in which there is a deficiency of red globules, or coloring matter in the blood. It is marked by extreme pallor in those parts, such as the lips, which are generally suffused; and it is not uncommon in young females of a weak or scrofulous habit. It appears to arise from a deficiency of vital energy in the system, either constitutional or brought on by want of nourishment, breathing impure air, or great loss of blood. In any case a cure may be effected by good generous diet, pure air, moderate exercise, and strengthening medicines.

Treatment.—Any of the various preparations of iron may be taken in combination, if the appetite be bad, with some bitter tonic, such as infusion of gentian, with a little quinine. Should there be much emaciation, cod-liver oil, taken in orange wine, will be of service. The pores of the skin should be kept open by tepid sponging, and the bowels moderately so by a rhubarb or colocynth pill now and then. Strong purgatives should be avoided, and especially salines. In young females the absence of the monthly discharge need cause no uneasiness; with returning strength that will most likely return. Should it not do so, however, when this treatment has been persisted in for a time, and should the pallor, languor, sleeplessness, headache, confined bowels, swelling of the feet, etc., which generally distingnish anæmia, continue, a medical man ought to be consulted, as it is likely there may be consumption, or other organic disease, at the root of the mischief,

Barrenness.—Barrenness is the defect of power in the female to produce offspring.

Causes.—It is caused sometimes by want of tone or strength in the system; nervous debility; sometimes the result of malformation of structure in some part of the generative organs; and sometimes by functional disorders from local or constitutional causes.

Treatment.—Cold bathing, or dashing cold water on the loins daily; general tonics, or strengtheners to the system; electricity or galvanism applied locally. A milk and vegetable diet is recommended, and abstinence from sexual indulgence for a time. Take plenty of exercise early in the morning in the open air, and take two scruples each of compound aloetic pill, compound rhubarb pill, sulphate of iron, extract of henbane.

Mix and divide into thirty-two pills. Take one every night and the following in the daytime:—Compound tincture of valerian, ½ ounce; compound tincture of lavender, 1 ounce; aroatic spirits of ammonia, ½ ounce.

Mix, and take a teaspoonful twice a day in two tablespoonfuls of infusion of cascarilla.

Green Sickness.—This disease has obtained its name from the pale and greenish cast of the skin of the patient. It is one of the forms of anæmia, and chiefly affects young girls, although adult and even married women, and young delicate males are subject to it.

Causes.—The disease appears to arise from a defect in the blood of red particles, and other constituents, and this is caused by defective assimilation. Those young persons of sedentary

habits, or who work in crowded factories or shops, or who live in underground kitchens, and like places, are particularly subject to it.

Symptoms.—In addition to the pallor of the skin, which is common to the forms of anæmia, this has some peculiar symptoms, such as hysterical paroxysms, and extreme nervousness, pain in the side, swelling of the ankles, headache recurring at certain periods; there is also frequently depraved appetite and a disclination for wholesome food altogether. If the case is long neglected, the symptoms become greatly exaggerated, the secretions are unhealthy in character, and deficient in quantity; the limbs swell, the pains in the head and face become more severe, and so weak is the patient that every exertion, even the slightest, is laborious; the depraved appetite becomes more remarkable—cinders, chalk, slate-pencil, and articles equally unfit for eating, are eagerly sought for, and masticated with avidity.

Treatment.—Change of air, tonics, and the course of treatment prescribed under the head of *Anæmia*, is the best in such cases. Exercise, fresh air, and nourishing diet, are the great restoratives. Iron is the best tonic, alone or in combination with quinine. It should be given in the least nauseous form, and at least one hour before meals.

Hysterics (*Hysteria*).—A nervous affection, chiefly seen in females, and generally connected with uterine irregularities. The age at which there is the greatest proneness to hysteria, is from that of puberty to the fiftieth year, that is, from the accession to the cessation of the menstrual life,—at the beginning and ending of which it is more frequent and marked than at any other period. Single women, and the married who do not bear children, are most subject to it, although it sometimes occurs at the early period of pregnancy and immediately after childbirth. Persons of studious and sedentary habits, and of scrofulous and weakly constitutions, are especially likely to be the subjects of hysteria, as are indolent and plethoric persons, and those debilitated by disease or excesses of any kind. It may be excited by excessive evacuations, suppression of the natural secretions, strong mental emotions, or sympathy with others so affected. It is a curious circumstance connected with this affection that it stimulates almost every disease to which humanity is liable.

Symptoms.—An attack generally comes on with a sensation of choking. It seems as if a ball were rising in the throat, and threatening to stop the passage of the air; then the trunk and limbs become convulsed, so much so that an apparentiy feeble

woman will require three or four strong persons to restrain her from injuring herself; then follows the hysterical sobbing and crying, with alternate fits of laughter. Generally the head is thrown back, the face is flushed, the eyelids closed and tremulous; the nostrils distended, and the mouth firmly shut. There is a strong movement in the throat which is projected forward, and a wild throwing about of the arms and hands, with sometimes a tearing of the hair, rending of the clothes, catching at the throat, and attempts to bite those who impose a necessary restraint.

A fit of hysteria may last for a few minutes only, or for severa lhours, or even days; persons have died under such an affliction. It may generally be distinguished from epilepsy by the absence of foaming at the mouth, which is nearly always present in that disease, and also by the peculiar twinkling of the eyelids, which is a distinguishing symptom of great value, and a sign of safety. In epilepsy, too, there is a complete insensibility, not so in hysteria; the patient retains partial consciousness; hence it behoves those about her to be cautious what they say. If any remedies are suggested of which she is likely to have a dread, her recovery may be greatly retarded thereby. In epilepsy there is laborious or suspended respiration, a dark livid complexion, a protruding and bleeding tongue; rolling or staring and projected eyeballs, and a frightful expression of the countenance. Not so in hysteria; the cheeks are usually red, and the eyes, if not hidden by the closed eyelids, are bright and at rest; the sobbing, sighing, short cries, and laughter, too, are characteristic of the latter affection. We point out these distinctions that no unnecessary alarm may be felt during a fit of hysteria, which is seldom attended with ultimate danger either to mind or body, although the symptoms are sufficiently distressing to cause some anxiety.

Treatment.—First prevent the patient, if violent, from injuring herself. Confine her hands, by wrapping tightly round her a sheet or blanket. The dress should be loosened, especially round the throat; and the face freely exposed to fresh air, and both that and the head well washed with cold water. If she can and will swallow, an ounce of camphor-mixture, with a teaspoonful of ether, sal volatile, tincture of assafœtida, or valerian, may be administered. Strong liquid ammonia may be applied to the nostrils; and if the fit is of long duration, an enema injected, consisting of spirits of turpentine, castor-oil, and tincture of assafœtida, of each half an ounce, in half pint of gruel. What is required is a strong stimulus to the nervous system;

therefore, dashing cold water on the face, and hot applications to the spine. are likely to be of service. Carlisle recommends that a polished piece of steel, held in boiling water for a minute or two, be passed down the back over a silk handkerchief. This has been found to prevent the recurrence of the paroxysm, which has before been periodic,—by which it would seem that the patient has some power of controlling the symptoms, when a sufficiently strong stimulus is applied, to enable or induce her to exercise it.

The patient's mind, during the intermissions of the attack, should be kept as tranquil as possible, and a tendency to all irregular habits or excesses held in check. If plethoric, there should be spare diet; if scrofulous and weakly, good nourishing food and tonic medicines, particularly some form of iron, the shower-bath, regular exercise, and cheerful company. Antispasmodics, and remedies which have a gently stimulating effect, will frequently relieve the sleeplessness complained of by hysterical patients better than opiates and other narcotics. In such cases Dr. Graves recommends pills composed of a grain of musk and two or three grains of assafœtida, to be taken two or three times a day.

Premature Birth.—A birth which occurs between the seventh and ninth month of pregnancy is generally so called. It is a contingency to be most carefully guarded against, for a child born before its regular time can scarcely be expected to have the strength and vigor of one who attains its full development in the womb. Nevertheless cases have been known in which the early-born child has grown up hearty and strong, and there are also cases in which, for the mother's sake, a premature labor is desirable, as giving the only possible chance of producing living offspring at all. There may be an unusually small pelvic cavity, owing to some malformation, or narrowing of the passage through which the fœtus has to pass, so that it can only do so by an operation, involving death to the child and great danger to the mother. Of course, none but a physician should be entrusted with the delicate task of bringing about a premature labor, and only such a sad necessity as is here hinted at should authorize him to attempt it.

Puerperal Fever, *(Childbed Fever)*.—This is one of the most fatal diseases which attack lying-in women. It is a fever of a very high character, arising from inflammation of the serous membrane, and often of the womb itself, and of its veins and absorbents. It runs a very rapid course, and is commonly fatal. It assumes the character of an epidemic, and frequently causes

great mortality in lying-in hospitals. Whether it is really contagious or not is yet an open question. The mere probability that it may be so should render persons extremely cautious in their intercourse with those who are suffering under it.

Symptoms.—There is usually an anxious countenance, sickness, hurried respiration, a furred tongue, and a stoppage of the secretions, especially of the milk. When these symptoms occur soon after childbirth, no attempt should be made at domestic treatment. Let the medical man be summoned immediately, if he be not already in attendance.

Puerperal Convulsions.—These sometimes come on after labor has commenced, or immediately on its completion; and, therefore, while the patient is in a state of great suffering and prostration. The hysterical form is the most easily dealt with, —merely dash a little cold water in the face, and give a teaspoonful of sal volatile in water, as in common hysteria.

The epileptic and apoplectic forms are both extremely dangerous. Blood will have to be taken either from the arm or the temporal artery, and strong mercurial purgatives administered; the hair must be cut short, and a blister applied to the nape of the neck, and cold lotions to the head. If by these means the convulsions can be subdued, and the delivery, if it has not taken place, be accomplished, there may be a chance for the patient. Care must be taken in the apoplectic form not to give opium, which will probably be required in the epileptic. Generally, however, a medical man will be present at such a crisis; if not, let him be summoned instantly.

Puerperal Mania, or Nervousness.—This disease frequently attacks women either a little before, during, or shortly after childbirth, and sometimes during nursing.

Symptoms.—Great nervous irritation; the face is commonly pallid, the eye troubled, the tongue white, and skin hot; the mind wanders, and conduct very irregular.

Treatment.—Give a purge of senna and salts, and keep the bowels regular by the compound rhubarb pill. Keep the room darkened, and let the patient be kept quiet, and free from the interruption of friends. If she is restless at night, give her an anodyne, such as twenty drops of hartshorn, or one grain of opium in a solid pill.

White Leg, or Milk Leg.—This troublesome disorder is apt to follow childbirth in some constitutions, and is of long duration.

Symptoms.—It may commence two or three days after delivery, or it may not for some weeks. There is a little fever,

and the parts about the thigh and groin feel hot, stiff, and painful; swelling commences, which extends over the whole limb, which does not, however, change color, except it be paler or whiter than natural. At this time the pain is usually very severe. After a time the symptoms abate a little, but the limb remains for a long time swollen, and comparatively useless.

Treatment.—Cooling purgatives, such as magnesia, and salts and senna, and warm fomentations and poultices. Judicious bandaging will be of great service.

Itching of the External Genital Organs.—The delicate internal lining of the external organs of generation sometimes become the seat of a most distressing itching, to relieve which, the parts may be so irritated by friction as to become violently inflamed. Leeches have been used sometimes with benefit; so has the application of cold, such as ice-water, or even lumps of ice introduced into the vagina. When there is an eruption like that in the sore mouth of children, injections of a strong solution of borax have been very useful; thick starch water, with a solution of sugar of lead, injected into the vagina, and retained for an hour or two, have been also of great utility in a few cases under our care. This irritation sometimes arises from disease of the womb, pregnancy, the presence of a stone in the bladder, or worms in the bowels. The original affection must first be attended to in these cases, as elsewhere directed.

CHILDREN AND THEIR DISEASES.

THE MANAGEMENT OF NEW-BORN INFANTS.

In most cases, the child begins to breathe and cry as soon as it is ushered into the world. This, however, is not always the case. Many children manifest no signs of animation when born, who may, nevertheless, be re-excited by prompt and judicious management. When this state of apparent death depends on the apoplectic condition of the brain, the infant's countenance exhibits a livid or deep red and bloated appearance; the eyes are prominent, and the surface of the body warm and reddish; sometimes the body is flaccid, and the navel-string has ceased to pulsate. Everything, in such a case, depends on the speedy removal of the congested condition of the brain. The umbilical cord should be immediately cut, and an effort made to stripe some blood from it with the fingers. When the cord pulsates vigorously, nothing more is generally required for setting the vital functions in play than to divide the cord and suffer the blood to flow freely from it. The child's head should be supported in an elevated position, cool water applied to the scalp, and the inferior parts of the body wrapped in warm flannel. An effort should be made to excite the respiratory functions by artificial inflation of the lungs and compression of the thorax with the hands. In inflating the lungs, a silk handkerchief folded double, or a fine napkin, should be laid over the mouth of the infant; the nurse should then apply her mouth to that of the babe, at the same time closing its nostrils, and endeavor, by a moderate but uniform force of insufflation, to fill its lungs with air. The covering of the mouth is recommended as a means of avoiding fatal rupture of the pulmonary air-cells. It is proper to observe that when these manifestations of cephalic congestion and general fullness are not present, that is, when the face and body present a pale and shrunken appearance, blood cannot be abstracted without much injury to the child.

Some infants remain for a minute or two after birth without any, or but a few respiratory efforts, although they will open

their eyes and move their extremities with sufficient activity. A few drops of cold water sprinkled on the chest or abdomen will instantly cause them to breathe and cry out lustily. The main point of caution, in cases of this kind, is to avoid tying the cord until its pulsation has ceased, or has become quite feeble. In all instances where respiration does not ensue immediately after birth, or is any wise embarrassed, prompt attention should be paid to the removal of the viscid mucus which is usually lodged in the mouth, fauces, and larynx of new-born infants. A finger surrounded with a piece of soft linen should be carefully introduced into the mouth, and the tenacious slime brought away.

Infants are sometimes born in a state of asphyxia, without any signs of congestion or vascular fullness,—the surface of the body being pale, and the face free from puffiness, which occurs in apoplectic or congestive cases. If, in such cases, the cord continues to pulsate, it must on no account be divided until pulsation has ceased. The mouth should be immediately cleared in the manner just mentioned, and a little cold spirits, or water, dashed on the pit of the stomach. So long as the cord beats, some stimulant, such as brandy, spirits of camphor, or ether, may be applied to the lips and nostrils. It will also be proper to rub the body and extremities, gently, with dry warm flannels. When the pulsation of the cord has ceased, and the child still continues in this state, the cord must be divided, and the infant wrapped in dry and heated flannel, which is better than the use of the warm bath. Infants in this condition should not be hastily abandoned. Thirty minutes and even a longer period may elapse before the child begins to respire.

In all instances where resuscitation has been effected from a state of asphyxia, it is of the utmost consequence to suffer the infant to lie perfectly at rest, for several hours, before it is subjected to the agitation and fatigue of washing and dressing. Infants born between the seventh and eighth months, generally remain in a somnolent state for several weeks, and ought to be as little disturbed by washing and dressing, or feeding, as possible.

Occasionally feeble infants suddenly sink into a state of syncope, or apparent death, after everything seemed going on well. This deathlike condition usually continues a few minutes, and then gradually passes off, leaving the infant in a languid and fretful state. This affection is probably the result of some intestinal irritation. During the paroxysm, efforts must be made to re-excite the vital power by wrapping the child's body in a

piece of thick flannel wrung out in hot whiskey. A drop of ether, or spirits of camphor, should be applied to the nostrils and lips; and weak sinapisms laid to the soles of the feet.

The general rule as to tying the cord, with the exceptions above noticed, is, that it is the safest to delay the tying of it, until it has entirely ceased to pulsate.

The Meconium.—The fæcal matter formed in the bowels of infants, before birth, is called *meconium*. Its timely removal is an object of no small importance. Nature has furnished the appropriate purgative for this purpose, in the first milk, or *colustrum*, secreted in the maternal breasts. The small portion of fluid which the child usually obtains at the breast, during the first nine or ten hours, possesses a decidedly purgative character, and generally causes the entire evacuation of the meconial matter. But instead of putting the infant early to the breast, and waiting for the operation of this congenial laxative, the almost universal custom is to introduce some artificial purgative into the stomach, such as castor-oil or syrup of rhubarb, or sweet oil, or molasses. Nothing can be more prejudicial to the infant's health than this. Apply the infant to its mother's breast before the proper milk is secreted, and, in nine cases out of ten, adequate purgation will be produced without any irritation of the system. It is only when the colustrum fails that artificial purgatives should be resorted to; and, for this purpose, a teaspoonful of molasses diluted with a small portion of warm water, or a teaspoonful of castor-oil, should be given. Where there is great torpor of the bowels, two grains of ipecacuanha, with five grains of powdered rhubarb, may be given every hour until free evacuations are produced. The warm bath will, in general, promote the operation of the purge,—especially placing the lower part of the body in warm water, and making cold applications to the head.

Washing and Dressing.—When the infant is born, and the function of breathing is well established, it must be carefully separated from the mother, and secundines, wrapped in a soft piece of flannel, its mouth and nose being left uncovered, and handed to the nurse. The washing of the infant should, if possible, be performed in an adjoining room to that in which the delivery has taken place, as nurses in general make much noise and bustle about it. The water used for washing healthy and vigorous infants should be lukewarm; but for very weak ones, water of a higher temperature will be necessary. The skin of the infant at birth is covered with a whitish cheesy kind of substance, which is most abundant in the folds of the joints,

the groins, and armpits. It is particularly important to the health and comfort of the infant that every particle of this substance should be removed; but as it is wholly insoluble in water, and is but very slightly acted on by soap, we must employ lard, or fresh butter, or the yolk of eggs, to render it soluble. Before any water is applied to the infant's body, the skin should be smeared and gently rubbed with one of these substances, after which the whole may be easily washed off with warm water and mild soap. When the infant is delicate or extremely feeble, the addition of a teaspoonful of wine or brandy to the water in which it is washed may be of great service; but unless such a special reason for stimulating applications be present, plain water is decidedly the most proper. After the child has been thoroughly washed, it should be well dried and immediately dressed. Throughout the whole period of infancy, the child's body should be washed every morning and evening. The practice of dusting fine starch or hair-powder over the body, with the view of keeping the skin dry and soft, is improper. On the appearance of any excoriations, a finely powdered starch may be dusted over the affected parts with benefit.

The Dress.—The first thing to be done in dressing the infant is to fix the remains of the navel-string, or umbilical cord, in a proper manner. The nurse takes a soft piece of linen, about two inches square, cuts a small circular hole in its centre, through which she bring the remaining part of the naval-cord, and then envelops it. She next turns it toward the chest of the infant, and places a small flannel bandage or roller over it and round the body. This bandage should be a simple strip of flannel, about four inches wide, which should be worn sufficiently loose to admit of the easy introduction of a finger under it. Almost every part of the infant's dress should open on the back, and be fastened by tapes or buttons; pins ought to be entirely laid aside. The clothing should be warm, light, and loose. The lightest and sofest kinds of flannel should be worn in winter; in warm seasons muslin may be sustituted for the flannel; but common sense dictates the propriety of constantly accommodating the clothing to the varying state of the weather. The infant should never be suffered to sleep in the flannel which has been worn during the day; and in the morning it ought to be again changed. During the first eight or nine months the child's clothes should extend considerably below the feet, in order that the lower parts of the body may be duly protected against the cold. After this age, however, the feet should be entirely unincumbered. During cold weather, fine woollen

stockings, sufficiently wide to be easily put on, should be worn; but in warm weather, light soft flannel socks will suffice. The shoes should be made of light pliable materials, and sufficiently large to prevent all constraint of the feet. In very young infants, thin woollen socks will protect the feet sufficiently during warm weather; but when they are about learning to walk it is best to have the feet protected against accidents by soft light shoes. It is highly important that the child should be kept as dry as possible. Its under-clothes should be immediately removed when wet, and replaced by dry and clean ones.

The Food of Infants.—With healthy infants, several hours at least should be suffered to pass, immediately after birth, before any alimentary substances are introduced into the stomach. A few teaspoonfuls of some very bland and weak fluid might not be detrimental, but the usual practice of filling the stomach to distention with gruel, or pulverized biscuit dissolved in water, or some such preparation, is exceedingly to be deprecated. In nine cases out of ten, perhaps, the gripings, flatulency, diarrhœa, and colic, which so frequently harass infants during the first six months of their existence after birth, are the results of indigestion, brought on by errors in diet. And then, to relieve these symptoms, nurses employ catmint tea, aniseseed tea, paregoric, or some other pestiferous palliative or nostrum; and thus, an additional source of stomach-derangement, or indigestion, is brought into operation on the unfortunate babe. The infant's digestive functions are often injured also by the exhibition of active purgatives. There is no substance in nature, nor can there be anything prepared by art, which forms so congenial and wholesome a nourishment to the young babe as its mother's milk. It is almost superfluous to remark that nature manifestly intended this fluid as its sole nutriment at this early stage of life, and until the primary teeth make their appearance. Should their exist any inability of suckling the child, a mixture of two parts of fresh cow's milk and one part of warm water approaches nearer to the nature of human milk than anything else that can conveniently be procured. After the first teeth have come out, small portions of barley-water, thinly prepared arrow-root, or a mixture of equal parts of cow's milk and water, may be given two or three times daily, in addition to the nourishment drawn from the breasts. The food should be introduced into the stomach as gradually as possible, and, we must again repeat the caution, care should be taken not to overload the stomach. After the seventh month, small portions of the food just mentioned should be given at regular periods,

three or four times daily. The practice of dandling or jolting infants soon after they have taken nourishment is decidedly improper. The child should be left quiet for at least thirty or forty minutes after having received its food.

Employment of Nurses.—Mothers are not always in a condition which enables them to suckle their own infants. This is unfortunate, for it cannot be doubted that the mother's milk is, in general, better adapted to the constitutional temperament of her offspring than that furnished by others.

No woman who has led a debauched course of life, even though reformed, can be regarded as a perfectly safe nurse. Females of this description are apt to have their system contaminated with some morbid taint which may give an unwholesome quality to the milk. The nurse should be of sound and vigorous constitution, and the age of the milk should not vary much from that of the infant itself, up to the fourth month. After that period such a relation between the ages of the milk and child is not of much importance. A nurse who has but one good breast should never be selected, for a babe suckled by one breast only is apt to contract the habit of squinting. To avoid this, the babe should be nourished alternately from both breasts. Particular regard should be had to the temper and moral habits of the nurse. It is hardly necessary to observe that an irritable, passionate, and sour-tempered female is but ill-suited for the important duty of nursing.

Artificial Nursing.—Under judicious management, infants will, in general, experience no inconvenience from a course of artificial nursing; and, as a general rule, this mode of nourishing children is preferable to the employment of a wet-nurse whose competency and fitness for the duty are equivocal. Very young, and peculiarly delicate and feeble infants seldom do well when raised by hand; and when, upon trial, the slightest kinds of artificial aliment are found to disorder the alimentary canal, the life of the infant will very probably depend upon a fresh and wholesome breast being instantly procured for it. When artificial nourishment must be resorted to, a mixture of two parts of fresh cow's milk, and one part of warm water, with a very small portion of sugar, will, in general, answer the purpose better than any other kind of food that can be contrived. Thin barley-water, or a very liquid preparation of arrowroot, will sometimes be useful as a change of nourishment, where, from acidity in the stomach, the milk curdles and causes griping. The sucking-bottle is decidedly the best mode of feeding the child, but particular care should de taken to keep it always per-

fectly clean and sweet. It should be well washed, both inside and outside, with hot water every morning and evening.

Children who are entirely nursed by artificial diet should be restricted to the use of the milk and water mixture already mentioned, until several teeth have made their appearance. After the third month, however, the proportion of milk should be increased to three parts of milk and one part of water. After the first teeth appear, grated hard biscuit dissolved in warm water, oatmeal gruel, liquid preparations of arrowroot or sago, milk thickened with flour, and thin pap, may be allowed in moderate quantities. When these preparations do not agree with the child's stomach, they should be mixed with an equal portion of weak chicken or beef broth, clear and well freed from fat. With some children, no form in which cow's milk can be given will agree with the stomach. In such cases, farinaceous decoctions, mixed with a small portion of cream, are generally digested with ease. Thin oatmeal gruel, or rice flour boiled in water, with the addition of a teaspoonful of cream to every gill of liquid preparation will answer very well. All solid animal food should be withheld until the dog-teeth have first made their appearance. The animal food given to young children should be plainly roasted or boiled. Fried and broiled meats, and all food heated a second time should be avoided. Those children who eat least animal food, will, in general, be found the most healthy. Soft-boiled eggs form one of the most appropriate articles of food for children after the first teeth have come out. As a general rule, from three to four hours may be regarded as a suitable interval between the meals of the child; if it requires nourishment between the regular meals, small portions of liquid aliment should be used. When solid animal food form a part of the diet of children, it should be taken at noon or in the forenoon. Pure water, with or without small portions of milk, constitutes the best drink for children. The practice of allowing them a little wine, spirits, or malt liquors, is decidedly reprehensible. Indulgence in the use of cakes and candies is a copious source of disease during childhood. Dried fruits preserved with sugar, and fruits preserved with their skins, are peculiarly indigestible. Even two or three raisins have been known to produce the most serious and protracted disorder of the intestinal canal in infants. Apples, peaches, and apricots, when perfectly ripe and mellow, may be reasonably allowed to children in moderate portions, when the stomach and bowels are in good order. Nothing, however, is more prejudicial than unripe fruits. Stewed or roasted fruits may be allowed occasionally, provided that they are not very sour.

Exercise.—It is of great importance to allow the infant the freest possible use of the limbs. Muscular exertion is indispensable to the preservation of its health and the due development of its powers, and it should be an especial object of care to allow it entire freedom of motion for several hours daily, by avoiding all modes of dress and position tending to restrain the free use of its limbs. With this view, the infant should be taken from its bed, laid upon its back on a soft mattress or any other level and slightly resisting surface, and divested of everything calculated to restrain the motion of its limbs and body. This should be repeated two or three times daily, and in warm weather the air should be freely admitted.

Besides the exercise which infants thus obtain by their own muscular efforts, passive exercise should be regularly afforded them by carrying in the arms or riding in an easy carriage. The use of this kind of motion should be commenced as early as the second or third day after birth, provided the infant be not unusually feeble. At first, that is, a few days after birth, the infant should be taken from its cradle two or three times daily, laid on its back upon a pillow, and carried gently about the chamber. After the third or fourth week, the child may be carried, in a reclining posture, on the arms of a careful nurse, in such a way as to afford entire support to the body and head. This may be done by reclining the infant upon the forearm, the hand embracing the upper and posterior part of its thigh, whilst its body and head are supported by resting against the breast and arm of the nurse. When held in this way, it may be gently moved from side to side, or up and down, while it is carefully carried through a well-ventilated room. When the child has acquired a sufficient degree of strength to maintain itself in a sitting posture—which is seldom before the completion of the third month—it may be carried about in this posture for a short time, twice or thrice daily, provided the spine and head be supported by the nurse, an aid which can seldom be prudently dispensed with before the child is six or seven months old. All rapid, whirling, and concussive motions are calculated to injure the delicate organization of infants; therefore running or jumping with an infant in the arms, descending rapidly a flight of stairs, or whirling round, ought to be rigidly forbidden. The practice of supporting very young infants in a sitting posture on the knee, and jolting them violently, can not be too severely censured. These violent agitations powerfully affect the delicate organization of infants, and may be productive of spasms, epilepsy, and apoplectic fits. To gentle rocking of in-

fants in the cradle there seems no great objection, but rapid or long-continued motion of this kind should be avoided. Riding in a carriage, properly constructed, is an excellent mode of affording suitable exercise to infants. The body of the carriage should be long enough to permit the infant to lie down at full length, and the sides sufficiently high to prevent it falling or rolling out. The wheels should be low, and the carriage should be made to move at a moderate and equal pace over smooth ground. Very young infants should be laid down in the carriage, on a pillow, or a small and soft mattress, with the head slightly elevated, and so confined at the sides as to prevent the body rolling when the carriage is put in motion. After the child has acquired some degree of strength, it should be placed in a semi-recumbent posture, with its head and back well supported by pillows.

When the infant has acquired sufficient strength to support itself in the sitting posture, it should be frequently set down on a soft carpet, and surrounded with its toys. When left to the free use of its limbs, in these circumstances, it will soon learn to creep,—an exercise which should always be allowed to it. If the weather is serene, and the ground perfectly dry, the child may be carried out and placed on a grass-plat, where it can range about in all directions. If occasionally supported under the arms, it will easily learn to stand erect, but it should never be raised up or led, by one arm only. After children have acquired the use of their legs, walking is decidedly the best exercise they can take. When the weather is fine, they should be taken out daily, and allowed to run freely about on the grass, or ground, free from stones. A fall or two will do them little or no harm; when such do occur, they should not be soothed by expressions of extreme pity and sorrow, for children accustomed to excessive commiseration, will, when any little accident happens to them, never fail to strain their little lungs to the utmost by crying.

Air, Temperature, and Nurseries.—Pure air is indispensable to the entire well being of the human frame, and at no period of life are the effects of confinement in stagnant and impure air more obviously and lastingly detrimental than during the feeble and susceptible age of childhood. Infants ought to be accustomed to the fresh air as soon as they are two weeks old, and should enjoy it daily for an hour or two when the weather is clear and mild. They should not, however, be carried at once into the external air, without having been previously accustomed to the air of a well-ventilated chamber. After the child is three or four days old,

it ought to be conveyed several times daily out of its nursery into a room having at first only the window open, and, in four or five days afterwards, the doors also. This having been practiced for ten or twelve days, the child may then be carried out of doors and permitted to enjoy the pure and open air; but at first it should not be kept out more than ten or twelve minutes at a time. After a child has acquired the power of walking, it should be suffered to spend a great portion of its time in the open air, provided the weather is temperate and dry; but while children are to be encouraged to take exercise and active amusement in the open air, they should not be permitted to lie down or sit on the cold and damp ground, or in a strong current of air in the shade when they are in a state of perspiration from exercise; nor should they, on any account, be permitted to drink cold water when thus heated.

Nurseries, ought, of course, to be kept clean and well ventilated. When the atmosphere is mild, the external air ought to be freely admitted by keeping a window open during the day, and at night the chamber door should be left open. The floor should be kept clean and dry; wet and soiled articles of clothing should be instantly removed; and the temperature should never exceed sixty-eight degrees of Fahrenheit. The general error here is to keep the apartments of children much warmer than is consistent either with their comfort or health. Warm rooms principally contribute to the extraordinary mortality of children, who are carried off by convulsions in the first months of their lives. The nursery ought always to be of ample dimensions, and the windows should be provided with iron bars to prevent children from falling out, and all superfluous furniture should be excluded.

Weaning.—The proper time for weaning is soon after all the incision teeth have made their appearance. This varies considerably in different cases, but will seldom be delayed beyond the eleventh month, and in the majority of instances, will occur between the ninth and tenth months. Some infants, indeed, have teeth before the sixth month, and others not sooner than the twelfth or sixteenth; for the first it would be too soon to advise weaning,—for the latter, it would be too long to delay it. It would be injudicious to attempt weaning when the child's health is bad, while it is teething, or while laboring under disease of any kind, as the breast is a source of tranquility—a kind of sedative in all the diseases and varieties of temper of infants. Weaning ought always to be accomplished, if possible, in a gradual manner; as the period of weaning approaches, small

portions of bread, bread and milk, milk thickened with rice, or flour, or chicken tea, should be allowed the child, twice or thrice daily, whilst at the same time the intervals of suckling should be more and more prolonged. When the child is gradually accustomed to take other food, and very much amused by its mother, it will easily be got to forget the breast, and seldom require it.

The process of weaning will be helped by allowing the infant to drink from a cup, pretty liberally, of milk, with a sixth part of tepid water. After the child has been weaned, its principal nourishment ought still to consist of liquid or semi-fluid substances—milk, milk boiled with bread or slightly thickened with rice or wheat flour, preparations of arrowroot, tapioca, or sago, oatmeal gruel, or hard biscuits finely pulverized and dissolved in warm water, with a little milk and sugar, should constitute the principal nourishment, until the eye-teeth, or fangs, have made their appearance. Along with these fluid alimentary substances small portions of bread and weak broth may be occasionally allowed; but it is particularly important to guard against too full and nourishing a diet immediately after weaning. In general, weaning may be accomplished with least risk during the mild months of April, May, September, and October. During the warm months of June, July, and August, the transition from the maternal milk to an exclusively artificial nourishment is more apt to be injurious.

Cleanliness, Washing, and Bathing.—Cleanliness is a most important requisite to a healthy state of the skin. The tendency of a foul state of the skin to give rise to various chronic cutaneous disorders, of a loathsome and harassing character, is well known. The general health, too, is liable to be impaired by an habitually unclean state of the surface of the body. We have already said that infants ought to be thoroughly washed over the whole body at least once a day. After weaning, it will be sufficient to wash the child once every other day. During the first three or four months of the child's existence, warm water should be used; after that period it should be only lukewarm, until the first teething is completed, when it ought to be still further reduced until it excites a decided sensation of coolness when applied to the body. The washing should be performed with a soft sponge or a piece of soft linen. While the infant is at the breast, the bath, in addition to washing, ought to be used every other day, and afterwards at least twice every week. Until the end of the third year, the bath ought to be tepid; and for feeble and sickly children, tepid water

must be used till a later period. In using the bath, the child's body ought to be immersed up to the shoulders or neck: the practice of immersing only the lower half of the body in the bath is decidedly objectionable. For the first four or five weeks, the infant should not be kept beyond two or three minutes in the bath; the duration may be gradually prolonged until it extends to twelve or fifteen minutes—the period which a child may be allowed to spend in the bath after it has attained the age of four years. The best time for bathing children is about two hours after breakfast or dinner. The bathing ought to be conducted in a room moderately warm; and, on removing the child from the bath, it ought to be instantly wiped perfectly dry, and invested in warm and dry linen. Infants may then be placed in bed, which, in winter, should be previously warmed, and they will generally fall into a refreshing sleep. Children further advanced in age, who have already been accustomed to the cool bath, need not be put to bed, but rather encouraged to take exercise in the open air. The temperature of the bath ought to be about ninety-eight degrees of Fahrenheit during the first ten or twelve days of the child's existence. It should then be progressively reduced about one degree every month until the end of the first year, and continued at this degree of warmth until the completion of the second year. After this period, it is to be further reduced, though in a very gradual manner, until, about the end of the third year, it excites a sensation of decided coolness.

Tongue-tie.—It frequently happens that the tongue of an infant is so tied down and restrained in its actions, that sucking is rendered extremely difficult, and attended with a peculiar "clucking" noise in the fauces. When this is occasioned by the proper fleshy frænum extending to near the extremity of the tongue, nothing can with propriety be done towards remedying the evil; but when the part which ties down the tongue is not in the proper frænum, but a thin transparent member extending from it to near the tip of the tongue, it may be immediately divided with a pair of blunt-pointed scissors.

Inflammation of the Breasts and Navel.—New-born infants are liable to a singular inflammation and enlargement of the breasts, which is often very injuriously treated by squeezing, sucking, or pressing them, in order that they may be "milked out," as the ignorant nurses talk of. In moderate cases of this kind, nothing more is necessary than to apply a piece of linen moistened with a little sweet oil; or a weak solution of the muriate of ammonia in vinegar and water, in the proportion

of a dram of the ammonia to four ounces of vinegar. The solution ought to be applied warm by moistening pieces of linen with it, and laying them over the affected parts.

Inflammation and consequent ulceration about the navel is a frequent occurrence during the first nine or ten days after birth. The most common cause is deficient attention to cleanliness, particularly in not clearing away the white caseous matter from about the umbilicus. A solution of the sulphate of copper, in the proportion of ten grains to an ounce of water, may be applied once or twice daily, and the parts afterwards covered with lead ointment, where there is superficial ulceration without much inflammation. Whatever applications are made, the parts should be carefully washed with lukewarm water, at least twice daily.

Jaundice of Infants.—In many instances a yellowness of the skin comes on within three or four days after birth, but soon disappears again, without producing any unpleasant consequences. When, however, the white of the eye becomes yellow, the bowels get costive, and the stools are whitish or clay-colored, and there is an indication to vomit, a suitable course of remedial measures should be instantly resorted to.

Treatment.—Much benefit may often be derived from emetics. A few grains of ipecacuanha should be given every fifteen or twenty minutes until vomiting is produced; and when the disease is obstinate, the emetic may be advantageouly repeated every other day until the stools acquire a bilious appearance. In all instances of an inflammatory character, however, attended with soreness of the region of the liver and stomach, emetics ought not to be employed. In these latter cases, the fourth of a grain of podophyllin may be given every two hours, until two or three grains have been taken. If free purging does not ensue its operation must be aided by castor-oil given in teaspoonful doses every hour until the effect is obtained. After the bowels have been once freely evacuated, they should be kept in a loose state by administering one-fourth of a grain of podophyllin every morning, noon, and evening, with an occasional teaspoonful of castor-oil. In conjunction with these remedies, the daily use of the warm bath is beneficial; and gentle friction with the bare hand over the region of the liver and stomach, provided there be no hepatic inflammation or abdominal tenderness. Where infantile jaundice is accompanied with a febrile condition, four or five leeches ought to be applied to the right hypochondrium; and, in very violent cases, the application of a small blister to the region of the liver may do much good. Where there is

great constipation of the bowels, eight or ten drops of spirits of turpentine may be added to the dose of castor-oil. Where diarrhœtic symptoms are present, a fourth of a grain of Dover's powder, in conjunction with a grain of the bicarbonate of soda, may be given every three or four hours. It is hardly necessary to add that all severe cases of this disease should be treated by a medical man.

Retention, Suppression, and Difficulty of Voiding the Urine.—There may be little or no urine secreted during the first fifteen or twenty hours after birth, and yet the infant manifest no uneasiness; but when the inactivity is protracted much beyond this period, the consequences may be very serious and even fatal. A teaspoonful of weak parsley tea, with two drops of sweet spirits of nitre, given every half hour, and the employment of the hip-bath, will generally excite the proper action of the kidneys. Should these means fail, friction may be applied over the loins and hypogastric region, and a drop of spirits of turpentine in a teaspoonful of milk, given every thirty or forty minutes in conjunction with warm bathing and laxatives.

When there is retention of the urine, that is, when the urine is regularly secreted and conveyed into the bladder, but is not discharged,—a fact easily ascertained by the obviously increased distress of the child upon pressure with the hand on the hypogastric region,—the warm bath is to be employed, with purgatives and gentle friction, with camphorated oil; but, if the symptoms still increase, the bougie and catheter, in a skillful hand, must be immediately resorted to. Great care and delicacy are requisite in the introduction of such an instrument as the catheter into the bladder of an infant. It is also to be remembered that the bladder may continue distending, although small portions of urine are from time to time evacuated. This occurrence very frequently deceives the nurse, who imagines that the infant has obtained the requisite relief, while its sufferings and danger are momentarily increasing.

Pain and difficulty in voiding urine is a frequent complaint among infants, particularly during teething. When an infant is observed to have occasional fits of violent shrieking, this cause may be suspected. To ascertain the cause of the disease, the urine must be examined. If it presents a reddish sediment, the bowels should be freely evacuated with magnesia and rhubarb. Two or three grains of the subcarbonate of potash may be also administered twice or thrice daily. In cases where the urine deposits a whitish or yellow-white sediment, the bowels

are to be freely evacuated with rhubarb or castor-oil, and very small doses of Dover's powders exhibited. Half a grain of this article, with a grain of powered valerian, may be given every six hours to a child between two and five years of age. The diet should be mild and nutritious. Where there is no morbid condition of the urine, a weak infusion of parsley-seed mixed with an equal portion of flax-seed may be employed. Where there is a slightly inflamed state of the extremity or orifice of the urethra,—a case almost wholly confined to female children,—the application of citrin ointment, mixed with an equal portion of lard, seldom fails to effect a cure.

Incontinence of Urine—Incontinence of urine is a common affection in children. It is rarely attended with any particluar uneasiness. In the majority of protracted cases, it is owing mainly to the influence of habit.

Treatment.—If the urine is affected, the treatment should be regulated as indicated above, until it has been brought to a healthy or natural state. If this fails to overcome the habit, tincture of cantharides may be administered in doses of from ten to fifteen drops, thrice in the course of twenty-four hours, until a burning pain is experienced at the neck of the bladder on passing the urine. When this effect is produced, the use of the cantharides must be omitted; if it is too violent, it may be moderated by mucilaginous drinks, such as flaxseed-tea, and the use also of the warm hip-bath. When there is an irritable state of the bladder, cooling laxatives and opiates must be employed, with a mild diet. The child affected with incontinence of the urine should always be made to sleep on its side or belly, and should always be required to empty the bladder just before going to bed.

Teething.—The progress of teething is usually accompanied with general irritability of the system; one or both cheeks are often flushed, and the infant frequently starts in his sleep. This period is upon the whole one of the most perilous stages of life,—as many complaints which, at other periods, would have terminated favorably, often acquire a fatal violence from the irritable and irritative condition of the system. The occurrence of convulsions from difficult dentition is very common, and nothing tends more to favor their occurrence than improper diet, or overloading the stomach. Various eruptions on the skin are also frequently attendant on teething. Infants are also liable at this period to a peculiar croupy affection, attended with extremely difficult respiration. Fever is, upon the whole, the most common sympathetic affection of difficult teething. It seldom, however, assumes a vehement character.

During teething the diet should be as mild and simple as possible. If the nurse has plenty of milk, nothing but it should be allowed until all the incisors at least are protruded. Should artificial nourishment be necessary, recourse may be had to the simple mixture of milk and water, mentioned in the article on "artificial feeding." All solid articles of food ought to be rigidly avoided. Regular exercise in the open air is of great utility during dentition, where there is no distinct fever. The head ought to be kept cool, and, during warm weather, no caps ought to be worn. The bowels ought to be kept open by small doses of epsom salts dissolved in some bland and slightly mucilaginous fluid. When the stools present a whitish or clayey color, one or two grains of podophyllin may be given every third or fourth evening, and a moderate dose of castor-oil or magnesia on the following morning.

A moderate diarrhœa need not be checked; it will rather do good within certain limits, by counteracting the febrile disposition of the system. If it appears necessary to moderate it, a powder composed of one-fourth of a grain of ipecacuanha, one-sixth of a grain of podophyllin, and four or five grains of prepared chalk, should be given every three or four hours. By giving two or three doses of this powder daily, the diarrhœa may generally be kept in a sufficiently moderate state. The child's mouth ought to be washed out with fresh water every morning; and it should be allowed a smooth coral or an ivory ring, to press and rub its gums with. The gums should be regularly inspected, and when much inflamed and swollen, should be freely divided by a lancet, directly over the point of the advancing tooth. The gums must be freely divided down to the teeth. This division of the gums is always to be resorted to when convulsions occur, if there be any signs of inflammation. When there are symptoms of cerebral irritation,—such as great fretfulness, flushing of the cheeks, and unusual sensibility of the eyes to the light,—the timely application of blisters behind the ears, or on the back of the neck, may do great service. The simultaneous application of cold to the head and warmth to the feet will also be useful. When the gums become ulcerated before the teeth are protuded, they should be lanced, and touched occasionally with a solution of four grains of sulphate of copper, or nitrate of silver, dissolved in an ounce of water, and applied with a dossil of lint.

Diabetes.—Diabetic affections are more common among children than is usually supposed, but seldom occur after the second year.

Symptoms.—In the commencement of the disease the child becomes languid and fretful; in a short time it begins to fall off in flesh, while the skin becomes dry, hard, and flabby; as the disease advances, the bowels get disordered, and the tongue is covered with a white fur, or thick transparent mucous; the abdomen also becomes distended and tense, and in the more advanced stage of the disease, the brain is generally more or less affected. The most remarkable symptom, however, is the inordinate discharge of urine, with or without sedimentous matter.

Treatment.—In treating this disease, in cases where the urine is clearly saccharine, an animal diet should be substituted for the usual farinaceous or milk diet. If febrile symptoms are present, give mild aperients, and the occasional use of the warm bath. Opiates are often decidedly beneficial. To a child between one and two years old, a grain of Dover's powder may be given two or three times daily. In cases where the urine is not sweet, small doses of the bicarbonate of soda, in union with two or three grains of the bicarbonate of iron, may be advantageously employed. A turpentine plaster laid over the regions of the kidneys has been found of service in infantile diabetes. Where the digestive powers are good, beef tea, or weak chicken-broth, mixed with the usual farinaceous substances, or a portion of milk, may be given for diet. The state of the gums should be particularly attended to while the child is laboring under this affection.

Erysipelas.—Infants are liable to a peculiar erysipelatous inflammation within a few days after birth.

Symptoms.—It generally commences on the lower parts of the body, in the form of a small red blotch, which gradually spreads over the abdomen and the thighs, presenting a swollen dark-red surface. In most cases, soon after inflammation is established, vesicles make their appearance, and the disease soon reaches a dangerous condition, the tendency to suppuration and gangrene being very great.

Treatment.—On the first appearance of inflammation, wrap up the affected parts with cloths saturated with a strong solution of the sulphate of soda, and cover with oiled silk. The mucilage of slippery-elm bark, or grated potatoes, applied will check the spreading. If gangrene is indicated, apply a poultice of indigo-weed, or lotions of the permangranate of potash. In inflammation, give teaspoonful doses of the elixir cinchona and iron, in addition to the external application of the sulphite of soda.

Thrush.—This is one of the most common diseases of

infancy. It is characterized by a peculiar eruption of minute pustules, and a whitish incrustation of the tongue.

Symptoms.—There are generally much thirst, restlessness, languor, acid and flatulent eructations, loose and griping stools, drowsiness, pain, difficulty of sucking, and a copious flow of saliva from the mouth. The stomach and bowels are almost always prominently disordered, and the infant is apt to vomit after taking anything into its stomach. The abdomen is often sore to the touch, and great difficulty of swallowing is experienced. Feeble and sickly children scarcely ever escape this disease; children, also, who are kept in crowded or ill-ventilated apartments are especially liable to it.

Treatment.—The first object is to restore the healthy condition of the stomach and bowels, if disordered. Where the ejections from the stomach are sour, and the alvine evacuations of a grass-green color, from three to four grains of magnesia with two grains of rhubarb, and one of powdered valerian, should be given every two or three hours until the bowels are freely evacuated. If there is much general irritability and restlessness, after this the tepid bath, followed by a drop or two of laudanum, should be employed. The mucous membrane of the intestines is apt to become highly irritated in severe cases: the alvine evacuations in such instances are frequent, watery, and streaked with blood. When these symptoms are present, a large emollient poultice should be applied over the abdomen in conjunction with the internal use of minute portions of Dover's powder, with a solution of gum arabic as drink. Borax is a familiar remedy with nurses and mothers, as well as with the profession. It may be used either in form of powder, or in solution. If the former is employed, two or three grains of it, mixed with a small portion of pulverized loaf-sugar, must be thrown into the mouth every two or three hours; if the solution be used, a dram of the borax should be dissolved in two ounces of water, and applied to the mouth with a soft linen rag tied to the extremity of a pliable piece of whalebone, or with a soft feather. The practice of forcibly rubbing off the eruption is extremely reprehensible; for, when rubbed off in this way, the crust is soon renewed in an aggravated form. Where the mouth is very red, livid or ulcerated, we must have recourse to a decoction of bark. A half ounce of powdered bark, boiled about thirty minutes in half a pint of water, will make a suitable decoction; and of this about the third of a teaspoonful may be put into the child's mouth every hour or two.

Ulceration of the Mouth. — Children are liable to an

ulcerative affection of the mouth, which is evidently distinct from the ordinary aphthous eruption. It consists in a number of small ash-colored and excavated ulcerations, with elevated edges situated about the frænum, and along the inferior margin of the tongue and gums and on the cheek. They usually commence in the form of small, red, slightly elevated points, attended with slight symptoms of febrile irritation.

Treatment.—Clean out the bowels with a dose of magnesia and rhubarb. A solution of ten grains of the sulphate of copper in about three teaspoonsfuls of water, to which four teaspoonfuls of borax must be added, may be applied to the ulcers once or twice daily by means of a strong camel's-hair pencil. Solid food, especially salted meats, and fish, must be rigidly avoided during this complaint.

Colic.—Colic pains occur often, and with great severity, during the first five or six months of infancy. In slight attacks the infant suddenly becomes fretful, draws up its legs towards the abdomen, whines or cries for a few moments, and then resumes its usual quiet condition. After a very short interval, another attack of the same kind occurs, and again soon subsides; and this goes on until a volume of wind breaks from the stomach or bowels, or a thin fæcal discharge takes place, when relief ensues. In many cases, however, the symptoms are much more violent: there is excessive and unappeasable screaming, violent kicking, flushing of the face, writhing of the body, and a distended and tense state of the abdomen. When the colic pains are frequent, the general health of the infant almost always suffers obvious derangement; sometimes, however, the appetite remains good, and the infant goes on as if it were in every respect perfectly healthy. These pains are, in many instances, the consequences of overloading the delicate stomach of the infant with artificial food; sometimes they arise from bad milk; sometimes from the influence of cold.

Treatment.—When there is reason for believing that the breast-milk is unwholesome, proper dietetic measures are to be attended to by the nurse; but if, notwithstanding a regulation of her diet, the infant is still harassed by colic attacks, some advantage may perhaps be obtained by applying it to the breast at long intervals, and substituting small portions of artifical food, such as very thin arrowroot, barley-water, or a mixture of cow's milk and water. Magnesia, by its anti-acid and purgative effects, is one of the most useful remedies we possess for the management of this complaint. Three grains of magnesia with two grains of powdered valerian, may be given twice or thrice daily,

until all acidity of the stomach is removed. If this do not keep up a sufficient action of the bowels, the proportion of magnesia should be occasionally increased, or a few grains of rhubarb added to the powders.

As a temporary palliative for lessening the violence and duration of the attacks, Dr. Eberle recommends the following mixture: Dissolve one dram of camphor in an ounce of sulphuric ether; take thirty drops of this solution, twenty grains of magnesia, and six drops of laudanum, and mix them together with an ounce of fennel-seed tea. Of this mixture, a teaspoonful may be given to an infant from two to six weeks old; and, if sufficient relief be not obtained in half an hour, about half a teaspoonful more should be administered. Gentle friction with dry flannel over the abdomen is useful in aiding the expulsion of the confined wind. When this disease recurs periodically, the above remedies will seldom be found so powerful as in the common irregular form of the complaint; but when employed at all, they ought to be given the instant the paroxysm is about to commence. Viewing it as a periodical complaint, Dr. Dewees has administered a decoction of bark, during the intervals of the attacks, with great success.

We must here caution mothers and nurses, against the very common but very pernicious practice of administering large doses of anodynes or carminatives to infants. The habitual use of such substances almost always leads to very unfavorable consequences. Under this treatment, the appetite and digestive powers fail; the body becomes emaciated, and the skin sallow and shriveled; the countenance acquires an expression of languor and suffering; and a general state of apathy, inactivity, and indolence ensues, which will probably terminate in convulsions, dropsy of the head, glandular swellings, incurable jaundice, or fatal exhaustion of the vital energies. All the usual soothing mixtures contain more or less opium, and innumerable infants have been irretrievably injured by their employment.

Constipation.—Torpor of the bowels and consequent costiveness is of frequent occurence among infants. In some instances the bowels always require to be excited by artificial means. In constitutional costiveness, a period of from two to four days may intervene between stools without the child receiving any great injury, but it is prudent to watch such symptoms, especially where there is any tendency to convulsive affections.

Treatment.—Manna dissolved in warm water to the consistency of a thick syrup is a good laxative, in teaspoonful doses.

Costiveness from accidental causes is a more serious complaint. These causes may be a preternatural determination of the blood to the head, or an undue exhibition of opiates, or a rice diet, or unhealthy milk. Cold-pressed castor-oil is an excellent laxative in ordinary cases of this kind; if acidity be present, magnesia is the appropriate laxative. In moderate cases, the introduction of a soap suppository into the anus will be of service.

Vomiting.—Vomiting occurs more frequently, and, in general, with much less unpleasant consequences, during early infancy than at any other period of life. It often happens in robust infants who are nourished at exhuberant breasts, immediately after they have sucked. This is rather a salutary than a morbid occurrence, being a simple effort of nature to relieve itself of the superabundant nourishment with which the digestive organs are overloaded, yet it is always proper to guard against such over-repletion of the infant's stomach. With this view, the child should be taken from the breast the moment it begins to dally with it, or as soon as it ceases to draw as if it were really gratifying a necessary and proper appetite. When the infant has satisfied its appetite—we here repeat a caution already given—it ought not to be instantly jolted and dandled, but suffered to remain perfectly at rest for at least thirty minutes.

Treatment.—Vomiting connected with teething must be checked by blisters behind the ears, by dividing the gums, by purgatives, or by small doses of laudanum, as the case requires. In cases of vomiting excited by acidity of the stomach, repeated doses of lime-water and milk will be found serviceable. Where there is no acid present, and the food, having lain some time in the stomach, is suddenly and violently ejected, a drop or two of nitric acid in a little sweetened water, may be given. When the vomiting is excited by some improper article of food, a mild emetic, such as four or five grains of ipecacuanha may be given; or, in some cases, a little warm water will serve the purpose. If, after the stomach has been freed of its offensive contents, the vomiting does not cease, a few drops of laudanum, or of camphorated spirit in a little milk, will generally prevent its recurrence.

Diarrhœa.—Diarrhœa is more common during infancy than any other period of life; and it is also more apt to assume an unmanageable and dangerous character at this period than at a more advanced stage of childhood or adult age.

Causes.—The exciting causes of this disease are extremely various. Irritating, crude, and inappropriate articles of food or drink, are a frequent cause of diarrhœa. Children who are

entirely nourished at the breast are much less liable to this complaint than such as are partly nourished by artificial food. Some infants are invariably purged when fed with cow's milk, even when considerably diluted with water; others again are purged by arrowroot, although the usual effects of this substance are rather of a constipating character. Infants who are fed with solid food seldom escape suffering more or less diarrhœa. The practice of allowing them to gorge themselves with potatoes, meat, pastry, dried fruit, and other articles of this kind is particularly injurious, and often produces chronic diarrhœa. In some instances the mother's or nurse's milk gives rise to vomiting and purging. Cold, by suddenly checking perspiration, and determining the blood to the internal parts, frequently gives rise to bowel complaint in infants. Cold bathing, or washing; suffering wet diapers, stockings, etc., to remain too long on the infant; setting it down on the grass-plots, floors, steps, etc.; passing suddenly from a close and warm room into the cold external air; exposure to cold and moist weather without sufficient clothing, particularly about the abdomen;—these are the ordinary ways in which diarrhœa, from the influence of cold, is produced in infants; and cases arising from such causes are generally attended with catarrhal symptoms, more especially with cough. A high atmospheric temperature is frequently concerned in the production of this complaint; the occurrence of bowel-complaints among children is comparatively more frequent during the hot months of summer than in the colder seasons of the year.

Treatment.—Immediate attention must be paid to the diet. Do not give the child any solid food, and especially keep from it pastry, sweetmeats, and confectionery. The most appropriate food will be plain boiled rice and milk; in many cases simple boiled milk will arrest the discharges. Crackers and milk, gruel, tapioca, etc., are also useful. At the commencement of the attack give a mild purge of castor-oil or syrup of rhubarb, and use the warm bath. If the stools are sour, dissolve a teaspoonful of bicarbonate of soda in half a glass of water, and give a teaspoonful every hour. An excellent remedy for looseness of the bowels is tea made of ground bayberry. Sweeten it well, and give a half teacupful once in two hours, until the child is better.

Summer Complaint, or Cholera Infantum.—This disease is almost peculiar to children of large cities, and is most frequent to those who reside in small, crowded, and ill-ventilated apartments. It is rarely seen, except between the ages

of three and twenty-four months, seldom beginning before or after dentition.

Symptoms.—It usually begins with vomiting and purging about the same time, though in some instances, purging may take place a day or two before the stomach is materially disturbed. The tongue, in most instances, is slightly furred at the beginning of the disease; but, after a few days, it becomes smooth and polished, or dry and brown. The stools are commonly thick, frothy, and fluid, intermixed with little spots of green bile; though, at other times, they are as transparent as water, having only some flakes of mucous floating through them. After a short time, no bilious matter is to be seen in the discharges. The patient usually becomes immediately prostrate; and, if not speedily destroyed, it emaciates very rapidly. The vomiting and purging are not always constant, but sometimes occur in paroxysms, after intervals of a few hours; and in some fortunate cases, after a duration of five or six hours, they subside entirely. There is evident pain, or great uneasiness in the stomach and bowels, especially in the commencement. The hands and feet are cold, the skin of the body and head is hot and dry, and becomes shriveled or wilted. The eyes lose their lustre, the eyelids but half cover them, the nose becomes pointed, the skin contracted upon it, while the lips are thin and shriveled. In this condition the child lies upon the lap, or upon the pillow, apparently exhausted and indisposed to move, except when impelled to vomit, or cry for cold water,—the only thing which it is willing to take,—and this is often either thrown up instantly from the stomach, or suddenly passed off by the bowels. From this state it frequently sinks into stupor and insensibility, and often dies in convulsions. If the disease do not thus speedily destroy life, the stools assume a dark, offensive, and highly irritating character; the mouth becomes sore, covered over with white fur or superficial ulcers; the face bloated, the abdomen distended with flatulence, and when the system is greatly reduced, the skin is sometimes studded with spots of blood effused beneath the cuticle, or there may be some watery blisters scattered about the chest and other parts. The treatment of this very fatal disease is very complex and difficult. Fortunately, it is rare, except in large cities, where medical advice is at hand, and yields, or becomes mild, almost immediately on a removal to a cool country situation.

Treatment.—On the first appearance of the disease, if possible, take the child to the open air of a farm or small village. A well-ventilated apartment in the upper story of a house, if

not too much heated by the roof, will give children a much better chance of life, with or without treatment, than the ground floor. Let the child remain day and night in such a room. We have frequently seen the disease in the country, and found it very fatal; but only in residences where uncleanly habits have produced an artificial hot climate and the foul air natural to an alley in the midst of the free atmosphere of healthful districts.

For the prevention of this disease, we would earnestly press upon those mothers who reside in large compact towns, and in the lanes and alleys where the affection most prevails, to keep their houses cleaned and well aired; to wash the whole bodies of their children daily, or more frequently, with clean, tepid, or cool water, changing their dress sufficiently often to keep them cleanly clad; to abstain from the use of unripe or unwholesome fruit themselves, and by all means, to prevent their children from eating it. Let their infants be supplied, as far as possible, from their own breasts, and if they do not supply sufficient nourishment, let the balance be made up with pure cow's milk, either alone or moderately diluted with soft water. When any teeth make their appearance, or the gums appear swelled, and the child is fretful, let the gums be carefully and freely lanced; and if there be any eruption on the skin or behind the ears, let no applications be made to them, except for the simple purpose of keeping them clean without suddenly drying them up. If they should heal rather suddenly, and the child become restless or feverish, let a little blister ointment be rubbed behind the ears, till a discharge is produced, carefully keeping the blisters open, by dressing them with a little basilicon or savin ointment. Let the child wear flannel next its skin, and worsted stockings on its feet, even during the summer season; and when it has passed beyond its first year, let the diet be regulated strictly on the principles laid down under the head of weaning. In addition, give it gum-water, or rennet-whey, with a little gum arabic added to it. These measures, if promptly adopted, will often cure the disease without medicines. If vomiting is severe, give this mixture: camphor, one dram; sulphuric ether, one ounce; mix, and give ten drops every half hour. If this fails, give the following:—Sugar of lead, 5 grains; vinegar, 6 drops; loaf sugar, 3 drams; soft water one ounce. Mix. Dose, a teaspoonful every hour. When the vomiting has stopped, give the compound syrup of rhubarb and potassia, which will usually arrest the discharges. If the stools are sour, dark-colored, and disagreeable, give the following:—Pulverized charcoal, 1½ drams

pulverized rhubarb, 2 scruples; pulverized ipecac, 6 grains; extract of hyoscyamus, 12 grains. Mix, and divide into twelve portions. Dose, one in every three or four hours.

The following has been found very useful:—Pulverized rhubarb, 1 scruple; leptandrin, 10 grains; calcined magnesia, 2 scruples; pulverized cinnamon, 10 grains. Mix. Dose, three or four grains every third hour, to a child of six months.

Worms.—Worms often are present in early life, without any indication of disease, caused mostly by dietic errors.

Treatment.—An injection composed of a teaspoonful of spirits of turpentine mixed in a gill of milk, is very useful; or give ten grains of powder of pink-root night and morning. Flour of sulphur taken in the morning before breakfast has been recommended. For further treatment, see article on *Worms* (p. 265.)

Sore Eyes (*Purulent Ophthalmia*).—The purulent opthalmia of infants generally commences between the fourth and eight day after birth. At first, the eyelids appear glued together, and this symptom is attended, in the morning, with slight swellings and external redness. As the disease proceeds, the swelling of the eyelids increases, and a thick purulent matter begins to issue from the eyes; the child, at the same time, becomes very fretful and uneasy, and keeps its eyes constantly and firmly closed. When the inflammation is confined to the eyelids, the disease seldom occasions any serious injury to the eye. The exciting cause of this disease, thus early appearing, is, in most cases, some acrid or morbid secretion in the womb of the mother which has come in contact with the infant's eyes during its passage from the womb into external life. But, it may be proper here to caution nurses against the practice—too prevalent—of taking the infant as soon as born, before a blazing fire, with perhaps a candle at no great distance, and keeping it in this position with its tender visual organs exposed to the action of so much heat and light. The best way to secure the infant's eyes against the effects of any morbific matter which it has come in contact with in the womb, is to wash them in the most careful manner after birth. This should be done with tepid water, which should be frequently changed and freely applied, so as to insure the entire removal of any irritating matter that may adhere to them. In all instances, too, care should be taken not to expose the infant's eyes too suddenly and immediately to any strong light; for, although this may not of itself be capable of exciting the disease, yet there can be no doubt of its tendency to irritate the eyes.

Treatment.—Immediate attention must be given to this disease. If neglected in its early stages, the eye may be permanently injured, or perhaps destroyed. Keep the eyes clean with washes of flaxseed tea or lukewarm water. To prevent the eyelids adhering, rub a little glycerine, or rosewater ointment, along the edge of the lids. If the cornea be implicated in the least, drop into the eye a drop or two of this mixture: atropia, one grain; tincture of gelsemimum, thirty drops. If the child's health be impaired, it must be sustained by nourishing diet, cod-liver oil, and salt-water bathing; and apply friction to the skin. The bowels must be kept open with a little magnesia or castor-oil.

Croup.—This is an inflammation of the larynx and trachea, causing a difficulty of breathing, and a rough hoarse cough, with a sonorous inspiration of a very peculiar character, sounding as if the air was passing through a metallic tube. It most usually attacks children of from one to three years of age, to whom it sometimes proves fatal; very rarely are adults affected by it.

Symptoms.—The symptoms are merely those of a common cold, or catarrh; then comes on a dry cough, with hoarseness and wheezing; at night there is restlessness and rattling in the throat, after which the croupy crow and sound above spoken of gives unmistakable warning of the disease, which goes on increasing in intensity for a day or two, or perhaps several days, before there is a really alarming paroxysm, which mostly occurs about midnight. The child, after tossing restlessly about, endeavoring in vain to sleep, will start up with a flushed face, protruding eyeballs, and a distressing look of terror and anxiety; there is a quick vibrating pulse, and agitation of the whole frame, which presently becomes covered with a profuse perspiration. As the struggle for breath proceeds, there is clutching of the throat, as though to force a passage; the arms are thrown wildly about, the respiration becomes more labored, the rough cough more frequent, and the characteristic croup rings out like an alarm. There is expectoration of viscid matter, but so difficult is it to be got rid of, that the efforts appear to threaten strangulation; gradually the symptoms become weaker, and eventually the child falls into the sleep of exhaustion. It will probably wake up refreshed, and during the day may appear pretty well; but at night again, probably there will be a recurrence of the attack with aggravated symptoms, convulsions, spasms of the glottis, causing the head to be violently thrown back, in the effort to obtain a passage for the air through the

windpipe; there is a fluttering motion in the nostrils, the face is puffed and of a pale leaden hue; a film comes over the sunken eyes, the pulse becomes feeble and irregular; there are more gasping convulsive efforts to continue the struggle, but in vain; the powers of life at length succumb, and the patient sinks into a drowsy stupor, which ends in death. Such is the frequent course of this painful disease, and the changes from bad to worse are so rapid that there is little time for the operation of remedies, that is, when paroxysms have begun.

Treatment.—Confinement to the house in case of threatened croup is always advisable, unless the weather should be very warm and open, and then exposure after sundown should be avoided; a dose of calomel (about three grains) should be administered, and followed by nauseating doses of tartarized antimony, of which one grain dissolved in an ounce of warm water, and a teaspoonful of the solution given every quarter of an hour, until the effect is produced. Should the bowels be confined after this, give senna mixture, or scammony powder. Apply mustard and bran or flaxseed poultices to the throat. Fill the room with the vapor of boiling water,—a large kettle on the stove will effect this. Leeches, if the patient is full of habit and the breathing is very labored, and a spare diet, are the other remedial measures.

In the paroxysms, the most prompt and vigorous measures must be adopted to give any chance of success: bleeding in such quantity as to diminish the vascular action on the surface of the windpipe, and to relax the muscles; strong emetics to cause full vomiting, which often has a most beneficial effect; warm baths, and blisters applied from one ear to the other. Calomel combined with ipecacuanha powder, or tartar emetic, should be given every four hours or so; and, if the danger is extreme, counter-irritation by means of mustard poultices applied to the calves of the legs, &c. In leeching for croup, one leech for each year of the child's age is the general rule to be observed, and the best part is over the breast-bone, where pressure can be applied to stop the bleeding, if required; over the leech-bites apply a blister, should one appear necessary. If the above powders should cause too violent an action on the bowels, add to them a little chalk and opium. Should the child appear likely to sink from exhaustion, after vomiting has been produced, stay the emetics, and give liquor of acetate of ammonia twenty drops, with five or ten drops of sal volatile, or the same of brandy in a little water, or camphor mixture; a little white-wine whey may also be administered. Of course, the first

endeavor in an attack of croup should be to obtain medical assistance; but if this can not be procured, there must be no temporizing; resort at once to the remedies most ready to the hand, using them according to the best knowledge and discretion available. Let the contagious nature of croup be ever borne in mind, and especial care taken to keep apart those affected with it from any other children in the family or house. Let it also be remembered that the great agents in producing croup are cold and moisture; and the greatest of all the east wind, and that those who have once been attacked by it are peculiarly liable to a recurrence of such attack.

Croup is most likely to be fatal when inflammation commences in the fauces; and this, if discovered in time, may be stopped by the application of a solution of nitrate of silver to the whole surface within sight, and to the larynx.

Spasm of the Glottis or Child-Crowing.—This exhibits much the same symptoms as croup. It is not, however, of an inflammatory character, but is symptomatic of some other disease commonly coming on as a result of irritation caused by hydrocephalus, teething, worms, &c. The medical man only can judge of the probable cause, and he will use such remedies as are most applicable to the peculiarity of each case.

Treatment.—The following mode of treatment recommended by Dr. Leman, of Torzan, has, we believe, been found efficacious in many cases of croup. It is simple and easy of application. We give the details as furnished by Dr. Graves: "A sponge, about the size of a large fist, dipped in water as hot as the hand can bear, must be gently squeezed half dry, and instantly applied under the little sufferer's chin over the larynx and windpipe; when the sponge has been thus held for a few minutes in contact with the skin, its temperature begins to sink; a second sponge, heated in the same way, should be used alternately with the first. A perseverance in this plan during ten or twenty minutes, produces a vivid redness over the whole front of the throat, just as if a strong sinapism had been applied; this redness must not be attended or followed by vesication. In the mean time the whole system feels the influence of the topical treatment; a warm perspiration breaks out, which should be well encouraged by warm drinks, such as whey, weak tea, &c., and a notable diminution takes place in the frequency and time of the cough, while the hoarseness almost disappears, and the rough ringing sound of the voice subsides, along with the difficulty of breathing and restlessness; in short, all danger is over, and the little patient again falls asleep, and awakes in the morn-

ing without any appearance of having suffered from so dangerous an attack. I have repeatedly treated the disease on this plan, and with the most uniform success. It is, however, only applicable to the very onset of the disease; but it has the advantage of being simple, efficient, and easily put in practice, and its effects are not productive of the least injury to the constitution."

Snuffles, or Cold in the Head.—Children are very liable to this distressing complaint, caused by inflammation of the lining of the nose.

Treatment.—Rubbing the nose with goose-grease, lard, or tallow, will generally give relief. Keep the bowels open with a little castor-oil; and, if the stoppage in the nose is obstinate, give warm doses of catnip, penny-royal, or balm tea.

Hooping-Cough.—This well-known disease is chiefly but not wholly confined to the stages of infancy, and it occurs but once in a life-time. It may be described as spasmodic catarrh, and its severity varies greatly; sometimes being so mild as to be scarcely known from a common cough, at others exhibiting the most distressing symptoms, and frequently causing death by its violent and exhausting paroxysms.

Symptoms.—The first symptoms of this cough are those of a common cold; there is probably restlessness and slight fever, with irritation in the bronchial passages; this goes on gradually increasing in intensity for a week or ten days, and then it begins to assume the spasmodic character. At first the paroxysms are slight, and of short duration, with a scarcely perceptible "hoop," but soon they become more frequent and severe; a succession of violent expulsive coughs is followed by a long-drawn inspiration, in the course of which the peculiar sound which gives a name to the disease is emitted; again come the coughs, and again the inspiration, following each other in quick succession, until the sufferer, whose starting eyes, livid face, swollen veins, and clutching hands, attest the violence of the struggle for breath, is relieved by an expectoration of phlegm resembling the white of an egg, or by vomiting. When the paroxysm is over, the child generally resumes its play, or other occupation, and frequently complains of being hungry. As the disease proceeds, the matter expectorated becomes thicker, and is more easily got rid of, and this is a sign of favorable progress; the spasmodic paroxysms become less frequent and violent, and gradually cease altogether; but the changes here indicated may extend over a month or six months, according to circumstances, the season of the year having much influence in hastening or

retarding them—summer being, of course, the most favorable time. It is a common impression that, at whatever time of year an attack of hooping-cough commences, it will not end until May; this is simply because of the change in the weather which generally takes place in or about the course of this month. With a strong healthy child (when proper care is taken), there is little to apprehend from this disease, provided it be not complicated with others, such as inflammation of the lungs, or any head affection producing convulsions; it then proves a most dangerous malady, and is fatal to many. With children of full habit, the fits of coughing often cause bleeding at the nose, but this should not be viewed with alarm, as it relieves the vessels of the brain, and is likely to prevent worse consequences.

To weakly children hooping-cough is a very serious malady, —to all it is frequently a sore trial, but to them it is especially so; therefore, great care should be taken not to expose them to the danger of catching it. That it is contagious there can be no doubt; and, although some parents think lightly of it, imagining that their children must have it one time or another, deem that it matters little when, and therefore take no pains to protect them against it; yet we would impress upon all our readers who may have the care of infants, that a heavy responsibility lies at their door. It is by no means certain that a child will have this disease; we have known many persons who have reached a good old age, and never contracted it; and it is folly and wickedness needlessly to expose those placed under our care to certain danger.

Like fever, hooping-cough has a course to run, which no remedies with which we are at present acquainted, will shorten. The severity of the symptoms may be somewhat mitigated, and we may, by watching the course of the disease, and by use of proper means, often prevent those complications which render it dangerous; and this brings us to the consideration of the proper mode of

Treatment.—The first efforts should be directed to check any tendency to inflammation which may show itself; to palliate urgent symptoms, and stop the spasm which is the most distressing feature of the case. To this end, the diet must be of the simplest kind, consisting for the most part of milk and farinaceous puddings; if animal food, it must not be solid, but in the form of broth or beef-tea; roasted apples are good; and for drinks, milk and water, barley-water, weak tea or whey. Care must be taken to keep the bowels open with some gentle aperient, such as rhubarb and magnesia. An emetic should be given

about twice a week to get rid of the phlegm—it may be ipecacuanha wine or the powder. To relieve the cough, the following mixture will be found effective: Ipecacuanha, 10 grains; bicarbonate of potash, 1 dram; liquor of acetate of ammonia, 2 ounces; essence of cinnamon, 8 drops; water, 6½ ounces.

Dose, a tablespoonful about every four hours. Twenty drops of laudanum, or one dram of tincture of henbane may be added if the cough is very troublesome, but the former is objectionable if the brain is at all affected.

For night restlessness, two or three grains of Dover's powders taken at bedtime, is good; this is a dose for a child of three years old. Mustard poultices to the throat, the chest, and between the shoulders, are often found beneficial; so is an opiate liniment composed of compound camphor and soap liniment, of each six drams and four drams of laudanum. "Roche's Embrocation" is a favorite application, and a very good one; it is composed as follows: oil of amber, and of cloves, of each one half ounce; oil of olives, one ounce; a little laudanum is, perhaps, an improvement. This may be rubbed on the belly when it is sore from coughing. Difficulty of breathing may be sometimes relieved by the vapor of ether or turpentine diffused through the apartment. In the latter stages of the disease, tonics are generally advisable. Steel wine, about thirty drops, with two grains of sesquicarbonate of ammonia, and five drops of tincture of conium, in a tablespoonful of cinnamon water, sweetened with syrup, is a good form; but a change of air, with a return to a generous diet, are the most effectual means of restoration to health and strength.

Convulsions, Fits and Spasms.—Fits are cerebral, and arise from diseases within the head, or from irritation in the stomach and bowels, or from exhaustion; or they are evidence of, and depend on, some malformation or disease of the heart.

Treatment.—Domestic treatment should never be trusted in such terrific affections as these. Not a moment should be lost in sending for the medical man.

If anything may be done in the meantime, it is,—first, in either of the two former cases, to lance the gums; second, to evacuate the bowels by warm water injection, made more active by the addition of brown sugar; third, and to administer the warm bath. An important point, never to be forgotten in the hurry of these cases, is to reserve the evacuations for inspection, otherwise the physician will be deprived of a very important source of judgment.

In cases of fits arising plainly from exhaustion, there need

be no hesitation in giving five drops of sal volatile in water; light nourishment may be added; the feet must be fomented, and the recumbent posture preserved. In fits arising from an affection of the heart, the symptom is urgent difficulty of breathing; the child seems as if it would lose its breath and expire. In such a case, to do nothing is the best course; all self-possession must be summoned, and the infant kept perfectly quiet. Every change of posture, every effort, is attended with danger.

In all cases, it is well to clear the bowels by means of the slow injection of from a quarter to half a pint of warm water, with or without brown sugar; indeed, this is the most generally and promptly useful of all our remedies in infantile diseases. To this the warm bath may always be added, if administered with due caution. It should not be continued so as to induce much flushing or paleness of the countenance.

Measles.—This is a contagious eruption, commonly affecting children and the same individual but once.

Symptoms.—The first symptoms of measles are shivering, succeeded by heat, thirst, and languor; then follows running at the nose, sneezing, cough; the eyes water and become intolerant of light; the pulse quickens, and the face swells; there are successive heats and chills, and all the usual signs of catarrhal fever. Sometimes the symptoms are so mild as to be scarcely noticeable—sometimes greatly aggravated; but in any case, at the end of the third day, or a little later, an eruption of a dusky red color appears—first on the forehead and face, and then gradually over the whole body. In the early stage of this eruption there is little to characterize it, but after a few hours it assumes the peculiar appearance which once seen can never be mistaken. The little red spots become grouped, as it were, into crescent-shaped patches, which are slightly elevated above the surface, the surrounding skin retaining its natural color. On the third day of the eruption it begins to fade and disappear, being succeeded by a scurfy disorganization of the cuticle, which is accompanied by an intolerable itching. The febrile symptoms also abate, and very quickly leave the patient altogether—but often in a very weak state, and with a troublesome cough. Between exposure to the infection and the breaking out of measles, there is usually an interval of fourteen days, which is called the period of incubation; so that it is not uncommon, where there are several children in a family, for the cases to succeed each other at fortnightly intervals.

This disease is often rendered dangerous by complications with others; so that, although not in itself of a fatal character,

it frequently leads to fatal results. Where there are the seeds of consumption or scrofula in the constitution, they are likely to be called into activity during the debility which follows an attack of measles; dropsy often follows it, as do affections of the air passages, chest, and bowels.

Treatment.—Generally speaking, for simple measles, little medicine is required. Give the patient plenty of diluent drinks; let him have a spare diet, and a moderately warm and well-ventilated room; keep the bowels gently open; if a roasted apple, or a little manna in the drink will not do this, give a dose of castor-oil. Where there is much heat of the skin, sponging with tepid vinegar and water will completely relieve it, and also the itching When the eruption has subsided, and the desquamation of the skin commenced, a tepid bath will materially assist this process, and get rid of the dead cuticle. On the third or fourth day after the disappearance of the eruption, give a small dose of powder of rhubarb, jalap, or scammony. Care should be taken to protect the patient against change of weather, and to restore the strength by a nourishing diet. Attention should be paid to the cough. Give drinks of flaxseed tea or slippery elm, made slightly acid.

Sometimes the eruption of measles disappears suddenly—then there is cause for alarm; the patiently should be directly put into a warm bath, and have warm diluent drinks; if the pulse sinks rapidly, and there is great prostration of strength, administer wine whey, and the following draughts: 10 drops of aromatic spirits of ammonia, or 5 grains of the sesquicarbonate in ½ an ounce of camphor mixture, with a drop of laudanum every four hours; should the prostration be very great, weak brandy and water may be given. The state of the chest, head, and bowels should be closely watched for some time after the patient is convalescent, as disorders of these organs are very likely to occur, in which case it is probable that there may be pneumonia, hydrocephalus, or diarrhœa.

Malignant Measles is a variety which commences with the above symptoms in an aggravated form; the rash quickly assumes a livid hue, alternately reviving and disappearing, and is mixed up with dark red spots like flea-bites; in this form of the disease we have extreme debility, and all the symptoms of putrid fever, like which it should be treated. No time should be lost in procuring medical aid.

Herbal or Eclectic Treatment for Measles.—A strong tea composed of saffron and snake root always proves beneficial. Decoctions of licorice, marshmallow roots and sarsaparilla are

very good, as are infusions of linseed or of the flowers of elder; clarified whey and barley water are all excellent drinks in these cases. If the patient is costive, sweeten with a little honey.

Rickets.—This affection generally attacks children between the ages nine of months and two years, and is a complaint in which the bones have not their allotted earthly matter, and therefore are too soft to support the frame and perform the functions assigned to them.

Treatment.—Cod liver oil, good nourishing diet—chiefly milk; change of air and sea-bathing, with the following powders: Carbonate of iron, 6 grains; powdered rhubarb, 4 grains; distilled water, 6 ounces; one powder to be given night and morning. If the season be cold, the child ought to be kept warm; if the weather is hot, the infant should be kept cool, as sweating is apt to cause weakness, and too great a degree of cold has the same effect. The limbs should be rubbed frequently with a warm hand.

THE INFECTIOUS AND CONTAGIOUS DISEASES OF CHILDREN.

The teacher or director of the school is urged to give immediate personal attention to any child in the school who may appear ill, or who complains of feeling unwell. In such a case the teacher should specially note the presence of one or more of the following signs:

1. Increased temperature of the child's body, discovered by the teacher placing his hand upon the sick child's skin, particularly on the chest, armpit, face, or forehead.
2. Quickening of the pulse, as measured by the aid of a watch, together with hardness of beat.
3. Shivering. Increased or exaggerated sweating, not being the after-result of exercise, etc.
4. Great thirst, with loss of appetite.
5. Tongue more or less white, dry, or red.
6. A flushed or pallid face.
7. Increased or diminished brilliancy of the eye.
8. General weariness and indisposition; sense of fatigue with aching in the loins; headache; drowsiness or excitement; delirium.

The majority of the above-named symptoms will almost invariably indicate the presence of a febrile state.

Any child kept at home away from school for a week or more by its parents should, before returning to its school, bring a certificate of health, signed by a duly qualified medical practitioner.

Infectious Febrile Diseases.—*Small-pox* is rarely found in those schools where vaccination is enforced, as the majority of vaccinated children have not yet lost the protective influence of primary vaccination. Whenever possible, the teacher should have all the children over ten years revaccinated, especially in times of epidemic small-pox. The popular assertion, that, during epidemics of small-pox, revaccination tends further to develop small-pox, is absolutely false.

Small-pox sets in with fever, vomiting, and pains in the loins. After not less than two days, but most frequently on the third day of the illness, there appears—commencing on the face—an eruption of raised spots, more or less numerous, which pass later into pimples or pustules, having a depressed or navel-like center. These spots terminate in scabs, which should have completely disappeared before the child is allowed to return to school. Before readmission to the school the child should have had two or three baths.

Chicken-pox is a mild disease, occasionally preceded by fever. It is characterized by successive crops of *blebs*, preceded by red-colored spots, each new crop being apt to appear toward evening, and is generally accompanied with some accession of slight fever. Chicken-pox is characterized by pea-sized *blebs*, or blisters, filled with a transparent watery liquid, which soon becomes thick, muddy, or bloody, and terminates with scabs. Where the spots on the body are neither numerous nor well marked, the eruption is invariably observed among the hair of the head.

Measles is ushered in with general indisposition, fever, sneezing, weeping, and red eyes, loud noisy, cough; occasionally there may be bleeding from the nose and passing diarrhœa. After three or four days' illness, sometimes sooner, an eruption shows itself, first on the chin and face in small, irregular rose-red spots, slightly elevated, which soon spread over the surface of the body, leaving more or less pale, irregular patches of skin unattacked. The complaint is highly contagious. Children with measles, when *kept at home*, and not exposed to the chance of catching cold, generally do well.

Scarlet Fever commences with extreme general indisposition,

high fever, a dry, burning skin, pains about the throat, and vomiting. Generally toward the end of the first day's illness, sometimes even at the very outset, a child, but a few minutes before in apparent good health, presents itself with a raspberry-red blush or rash, which may either cover the body completely or else appear here and there in patches. The face, the interior of the thighs, the groins, and the neighborhood of the joints are favored situations for the rash. At first glance the eruption looks uniform, but a closer examination discloses innumerable round points, some of which are more pointed and higher than their neighbors, and often run into minute bladders about the size of a pin's-head.

Sometimes the disease is singularly mild; sometimes exceedingly virulent. Sometimes it is so fugacious that its presence is not suspected until the skin begins to peel, a process notably observed on the hands and feet. Frequently the joints, particularly the wrists, suffer pains analogous to those of rheumatism. Scarlet fever is an extremely contagious disease; and while after ten days' isolation and the use of a bath at the close, a child convalescent from measles may be allowed to associate with others, not less than six weeks' isolation is required to exhaust the communicability of a case of scarlet fever.

Mumps may come on suddenly, or else be preceded by a few days of general indisposition, which now and then amounts to high fever. A feeling of stiffness about the jaws is soon followed by swelling, often very bulky and more or less tense. The swelling is apt to extend either at the back of the lower jaw or underneath it. The swelling contains no fluid; dental pain is absent. Generally first one side of the jaw is attacked and then the other; it is rare for both sides to suffer simultaneously. Not uncommonly similar swellings burst out in other localities of the body, the genital organs being most liable to seizure.

Ulcerative stomatitis is a contagious disease. Its invasion may be preceded by general indisposition, usually unattended with fever. Grayish bleeding ulcers, tending to spread in extent and depth, attack the edge of the gums, the inner side of the cheeks and lips, and the roof of the hard and soft palates, accompanied with an extremely fetid breath.

Diphtheritic Sore Throat or Croup is eminently contagious. Its approach is insidious, often commencing with some difficulty in swallowing and slight hoarseness. Possibly the glands at the back of the angle of the jaw swell, which in serious cases extends to the neighboring structures of the neck. At other times these symptoms occur subsequent to a swelling about the

nostrils, with more or less copious discharge, indicating that the nasal membranes have been seized prior to those in the throat. Cough, if any, is faint and muffled; the voice is hoarse and smothered.

With a spoon press down the child's tongue, and note if there be any appearance about the tonsils and the soft palate of a skin or leather-like membrane, which may be grayish or whitish, or even blackened by vitiated blood. This false membrane, which characterizes the disease, is prone to spread over the neighboring parts, notably reaching downward into the windpipe. This diptheritic croup must not be confounded with false or spasmodic croup.

In *false* croup the child has generally been perfectly well during the day preceding the night on which it suddenly wakes up all at once ill with alarming signs of threatening suffocation, attended with loud clamorous coughing and a clear voice. Here no false membrane is present in the throat, nor are the glands about the jaw swollen. False croup is generally mild, and is not contagious.

Dysentery may be contagious. It is distinguished by a frequent, sometimes a continual, desire to seek relief in the closet, where in spite even of severe straining the child succeeds in passing only a little slime or mucous, often colored by small quantities of blood. General indisposition and colicky pains in the belly soon compel the child with dysentery to leave the school. To stop infection, no child suffering with dysentery should be allowed to use the general school water or other closet. Dysentery is not to be confounded with diarrhœa, where there are more or less frequent liquid motions.

Typhoid Fever is infectious, and is apt to set in or to sneak in with ill-defined signs. For some days the child may have lost its appetite and its general energy, it is fatigued and "done up." Then the fever is next ushered in with great pain, noises and confusion in the head; the hearing becomes obtuse; giddiness occurs, with great difficulty to keep any upright position. There is often bleeding from the nose generally followed up by colicky pains in and swelling of the belly associated with some diarrhœa. The skin is dry, parched and hot; the tongue fouled, with red tip and sides. However, the child before this has been compelled by its state of indisposition to cease attending the school.

Whooping-Cough is eminently contagious. The child may be noticed to have had during one or more weeks occasional but violent fits of coughing, which are most frequent during the

night. If no complication be present, there is practically no cough between these spasmodic attacks. Usually a short feeling of general indisposition precedes the attack, during which the child in vain struggles to suppress the cough about to burst, when all at once the trunk and frame are subjected to a violent series of successive throbs almost threatening suffocation. At this epoch a few deep drawings-in of the breath are followed by a whistling and almost convulsive inspiration, which may again be succeeded by boisterous coughing. Then in most cases, after a brief moment's repose, a second but a less severe and a shorter onslaught than the first is noticed. Lastly, the fit is terminated by the child's partly spitting and partly swallowing some thick mucous, often at the same time vomiting up any matter present in the stomach.

The time occupied by these seizures to their termination by expectoration varies from sixteen seconds to a couple of minutes.

Owing to the grave and fatal complications often associated even with apparently mild cases of whooping-cough, most especially in very young children, immediate isolation of the sufferer from its schoolfellows is necessary.

Ophthalmia.—Both catarrhal and purulent ophthalmia are highly contagious at all ages, but especially in very young children, and the last-named disease may cause the loss of one or both eyes.

The eyes and their lids become red, swollen, and bathed with a discharge often more or less offensive.

Contagious Parasitic Diseases.—*Itch* is characterized by the appearance of minute transparent vesicles, which occasion the most lively itching, particularly at night-time. The spaces between the toes and fingers, and the wrists, are most liable to invasion. The child's frequent scratching soon converts the rash into scabs, in which condition the disease will frequently first be noticed by the teacher.

The itch is caused by an insect (*Acarus scabei* or *Sarcoptes*) which is nocturnal in its habits and movements. Though highly contagious, the itch can be cured in a few hours.

Crusted Ringworm, or *Tinea favosa*, is caused by a vegetable parasite frequenting the scalp, although it may visit other parts of the body which are covered with hair or down. The hair becomes thin and fragile, with loss of its original color; then follow irregular, unequal, puckered, crust-like yellowish scabs, which may be single or may cover the entire scalp. The scabby flakes in drying and dying crumble to minute fragments, and as

dust propagate and disseminate the disease. Itching being frequent in scalp ringworm, the child's scratching increases the destruction and pulverization of the scab, and thus increases the chances of contagion to others.

The heads of such children as suffer from the disease have a peculiar fedid odor resembling that of a cat's urine. Till quite cured, every child suffering from *favus* should be separated from its school-fellows, and only be readmitted on presenting a proper medical certificate.

Common Ringworm, or *Tinea tonsurans*, is very contagious, making itself manifest by the hair of the head becoming thinner, more fragile, less colored than the surrounding hairs. The affected hairs are apt to turn reddish or ashy-gray; they seem as if evenly and artificially clipped off at a distance of say 1-14 to $\frac{1}{8}$ of an inch above the level of the outer layer of the skin. The surface of the patches is rough, irregular, shaggy, covered with a grayish, scurfy powder of a slightly bluish tinge. The diseased places may be one or more in number; the form is circular, varying in size from that of a silver florin to a crown-piece. By the fusing together of several of such parasitically affected localities the greater portion of the scalp may become affected.

Ringworm with Baldness of Scalp (*Tinea decalvans*).—This contagious complaint declares itself by the presence of defined patches naked of all traces of hair having a glistening ivory whiteness not unlike a scar without depression. Their sizes varies from that of a silver threepenny-piece upward.

Previous to the loss of hair there may have been considerable itching. The eyelids and other parts of the body covered with hair or down may also suffer from the vegetable parasite causing the disease (*Miscrosporon Audouin*). In children and adults with thick hair this disease may remain long undetected

DOMESTIC SURGERY.

ACCIDENTS AND EMERGENCIES.

How to Bandage.—There is not a more important art connected with domestic surgery than that of bandaging. To do it well requires much practice and no little judgment. The material employed in bandaging is usually stout unbleached cotton, from two or three to nine or ten inches wide, and from six to twelve yards long; the former length and breadth will do best for the leg. If commenced at the ball of the foot, and evenly applied so that each fold overlaps the other about one-third, it will reach to the knee. Fig. 99 will best show the mode of application. The bandage having been first tightly rolled up, is taken in the right hand of the operator; the end is passed under the foot, and held there by the left hand until it is secured by one turn of the bandage over it; an upward direction is then taken, so that a couple of folds brings the bandage up to the front of the leg, over the instep; the next turn will naturally pass above the heel behind; and then, if proper care be observed, it will go on fold above fold, each overlapping the other slightly, all up the leg. The bandage is passed from the right to the left hand each time it goes round the leg, and great care should be taken to hold it firmly, and equalize the pressure, as well as to smooth out any wrinkles that may occur in the process of binding. A firm and even support is thus afforded to the limb, which is not likely to crease, or get displaced by the motion which may be afterwards necessary; it may be made fast above

FIG. 99.



the calf, by a couple of pins, or a needle and thread. Great care should be taken in this, as in all similar operations, to get the bandage rolled up tightly and smoothly, before commencing; it may thus be grasped in the hand, and kept well under the command of the operator, who should on no account let go his hold of the bandage, so as to relax the pressure.

FIG. 100.



The arm does not require so long or broad a bandage as the leg; about two inches, by three or four yards, being the average size; this limb is rather more difficult to manage, half-turns being necessary to effect a proper envelopment. How this is effected may be seen by Fig. 100. The bandage is folded back upon itself, so as to take a different direction, and cover the space which would be left exposed by the ordinary method of folding; these half-turns, unless they are done tightly and evenly, will be apt to slip and derange the whole binding. Some operators avoid half-turns, by letting the roller take its natural course, and then coming back to cover the exposed parts; but this method, besides requiring a larger bandage, does not effect the required purpose so neatly and efficiently. One mode of fastening a bandage is to split it up a short distance, so as to leave two ends, which can be passed round the limb, and tied. It should always be borne in mind that the chief art in applying bandages is to give firm and uniform support, without undue pressure upon any part; and to effect this properly, the strain in winding should be upon the whole roll held in the hand, and not upon the unrolled portion of it. This strain should not be relaxed during the progress of the operation.

FIG. 101.

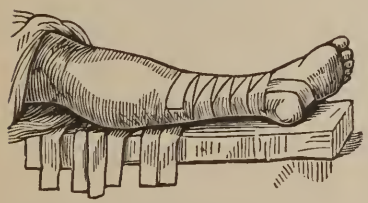


Fig. 101 represents the mode of applying what is called a many-tailed bandage.—useful to apply over a wound, or wherever it requires frequent changing, or in cases in which it is desirable not to exhaust the patient by much movement of the limb. This is a strip of cotton somewhat longer than the limb to be enveloped: on it are sewn, at right angles, other strips, about one-half longer than the circumference of the limb, each overlapping the other about one-

third of its breadth, so that when drawn tightly over in regular succession, each secures the other. The end of the strip passes under the heel, and coming up on the other side, is made fast to the bandage there, and so all is kept firm.

For keeping poultices on the lower part of the back, or in the groin, a cross-bandage is used, the fashion of which is this: make a cotton band, large enough to pass round the loins, and tie a buckle in front; to this is attached another piece, which proceeds from the centre of the back to the anus, where it divides into two, which pass under the thighs, up on either side, and are fastened to the band in front. The bandage is used to close a vein after bleeding is made, thus: lay the tape obliquely across the wound, pass it round the arm above the elbow, and bring it back again over the same spot; then let it go round the arm below the elbow, and returning, let the two ends be tied in a secure bow, in the bend of the arm, with the free movement of which the bandage should not be tight enough to interfere, although it must be sufficiently so to retain its position. This mode of bandaging is called the figure of **8**, from its resemblance to that figure. Fig. 102 will make the explanation clearer.

Fig. 102.



For a sprained ankle, place the end of the bandage upon the instep, then carry it round, and bring it over the same part again, and thence round the foot two or three times, finishing off with a turn or two round the leg above the ankle.

For a sprained wrist, begin by passing the bandage round the hand, across and across, like the figure **8**; exclude the thumb, and finish with a turn or two round the wrist.

For a cut finger, pass the bandage (a narrow one) round the finger several times, winding from the top, and splitting the end; fasten by tying round the thick part above the cut; or, if it be high up, tie round the wrist.

The best bandage for the eyes is an old silk handkerchief passed over the forehead, and tied at the back of the head. For the head itself, it is best to have a cross-bandage, or rather two bandages,—one passing across the forehead, and round the back of the head, and the other over the top of the head, and

below the chin, as in Fig. 103. Or, better than this, perhaps, a large handkerchief which will extend all over the forehead

FIG. 103.

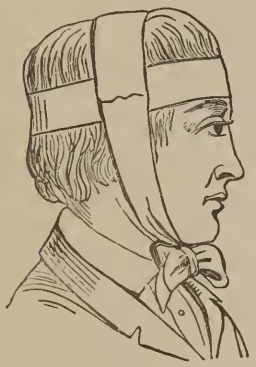
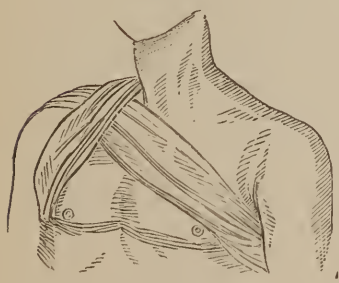


FIG. 104.



and crown, two ends of it passing to the back, and after crossing from thence round the neck, then tying the other two beneath the chin, as in Fig. 101.

FIG. 105.



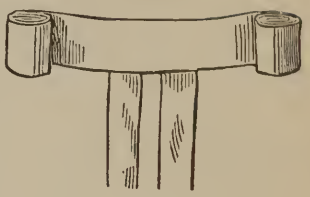
For a bandage to support a pad or poultice under the armpit, a handkerchief may be used, put on as in Fig. 105; or a broad piece of cotton, arranged in the same way.

For fracture of the ribs, bandages should be about nine inches wide, and drawn round the body very tightly. In this case, as in that of any other fracture or dislocation, only a properly qualified person should attempt their application. See articles on *Dislocations* and *Fractures*.

We have not yet spoken of the **T** bandage, which is simply a broad band to pass round the body, or elsewhere, having attached to it one of the same width, or narrower, like the upright part of the letter after which it is named; or, there may be two stems—if they can be so called—in which case it is a double **T** bandage, as in Fig. 106.

Starch bandages are those in which the roller, before it is put on, is saturated in a strong solution of starch. Sometimes a covering of brown paper is put over this, and another dry bandage is applied. This makes a firm and compact case for the limb. It is useful in cases of fracture, especially if the patient has to be removed to a distance. Sometimes, when it is not desirable to make the covering so thick and durable, the displacement of the bandages is guarded against by brushing a weak solution of starch or gum over the folds.

FIG. 106.



Bandaging should be performed, in nearly all cases, from the extremities upwards, or inwards to the heart, except where the injury is situated above the seat of the vital action. If they give much pain, there is reason to suspect inflammatory swelling beneath; and they should be loosened, if moistening with cold water does not relieve the pain. Flannel for bandages is used where warmth as well as support is required.

Burns and Scalds.—There are no more frequent, distressing, and dangerous accidents, than those which result in the above. They cause great pain, often amounting to agony; local injuries of a most serious character, and permanent constitutional derangement, even if death does not immediately or quickly ensue. The first rule to be observed in the event of the clothes catching fire, is to avoid running away for assistance, as the motion will only fan the flame, and increase the evil. Presence of mind in the sufferer is rare on such an occasion, but the best plan is to lie down and roll on the floor,—screaming, of course, for assistance. Whoever answers the call should snatch up a rug, or a piece of carpet, or other woollen article, and completely envelope the person in it. This will be sure to extinguish the flame. Then cut the clothing away from the burnt parts, taking care to use no violence where it adheres, nor to break any blisters which may be raised. The great object is now to exclude the air from the blistered or raw surfaces, and it is a usual plan to cover them with flour, and then wrap them in wadding, or cotton-wool. A good application is either of the above substances saturated in lime-water and linseed-oil, equal parts mixed; this is extremely cool and soothing, and it greatly assists the healing operation. It should not be disturbed for some days, unless the discharge should be great, and the wounds painful, in which case a fresh application of the same

should be prepared, and put on immediately on the removal of the other. The wadding or cotton-wool covering is sometimes applied quite dry, with good effect; and where the tissues are not deeply or extensively injured, a lotion composed of an ounce and a half of vinegar to a pint of water is a good application, as is also a saturated solution of carbonate of soda. The flour dredging is that which is the most readibly available, and it is as good as any. It should be applied immediately, and repeated as often as moisture is perceived issuing through the crust which it forms over the burnt parts; if these have fresh sweet-oil brushed over them with a feather, previous to the application of the flour, it will adhere better.

That which is to be most apprehended in severe burns is the great constitutional depression which often follows the excitement and severe pain; especially is this the case with children, and when the seat of this injury is the chest or abdomen, or other vital part. Hence the effects should be closely watched, and stimulants administered, if there are such symptoms as shivering, pallor of the countenance, sinking of the pulse, or coldness of the extremities. Ammonia, wine, or spirits, must then be given in doses sufficient to rouse the failing powers, without too much exciting the brain. If there is excessive pain, a slight opiate should be administered to allay the irritation of the nervous system, which, however, frequently receives so severe a shock as to lose its sensibility for a time; and when this is the case there is great reason to apprehend a fatal result. A burn, if properly treated, and unless very severe, will generally do well, and require little after dressing; but if the blisters are suffered to break, and the true skin beneath becomes inflamed by exposure, matter will be secreted, and troublesome ulcerations formed. Bread-and-water poulticing will be the best treatment in this case, with goulard lotion, if there is much inflammation, or an ointment composed of extract of goulard, one dram, mixed with one ounce of fresh lard. This should be applied spread on soft linen.

When the burn is deep, after the flour has been on for some days, poultices as above should be applied until the coating of flour all comes away, and the wound looks clean and clear; after which, the simple water dressing will be best, and when nearly healed, the goulard ointment as above.

When parts immediately contiguous are involved in the burn, care must be taken to interpose dressings, or they may become permanently united.

After the more immediate constitutional effects of a severe

burn have passed off, it will be necessary to be careful as to the patient's diet, which should be sufficiently nourishing and stimulative, especially while discharge is going on,—taking care, however, to reduce it if febrile symptoms should set in. So constantly are these painful accidents occurring, and so frequently does it happen that the care of a medical man can not be obtained for them, that it behooves all heads of families to make themselves acquainted with the best remedial measures. It should be borne in mind that the principal aims in the treatment of such cases are, first, the protection of the injured parts from atmospheric influence; secondly, to keep down inflammatory action, both local and constitutional; thirdly, to soothe the nervous irritation which may arise, and to sustain the system should too great depression take place.

Bruises.—The main thing to be attended to in treating a bruise, is to prevent inflammation coming on. Apply constantly to the part equal portions of goulard water and vinegar, or spirits and water. Or, bathe the part in warm water, and afterwards rub it gently with cold vinegar and water once every hour or so for a few days. Bruises are also well treated by the following lotion: tincture of arnica, one part; water, eight parts; apply with a cloth. Pouring cold water from a height two or three times a day on the bruise is very good.

Apparent Death from Drowning:

1. Treat the patient instantly, on the spot, in the open air, except in severe weather, freely exposing the face, neck, and chest, to the breeze.

2. Send with all speed for medical aid, and for articles of clothing, blankets, etc.

3. Place the patient gently on the face, with one arm under the forehead, so that any fluids may flow from the throat and mouth; and, without loss of time,—

I. *To excite respiration:*

4. Turn the patient on his side, and (*a*) apply snuff or other irritant to the nostrils; (*b*) dash cold water on the face, previously rubbed briskly until it is warm. If there be no success, again lose no time, but,—

II. *To imitate respiration:*

5. Replace the patient on his face (when the tongue will then fall forward, and leave the entrance into the windpipe free); then,—

6. Turn the body gently, but completely, on the side, and a little beyond (when *in*spiration will occur), and then on the face, making gentle pressure along the back, when *ex*piration will

take place, alternately. These measures must be repeated deliberately, efficiently, and perseveringly, fifteen times in the minute only. Meanwhile,—

III. *To induce circulation and warmth*, continue these measures,—

7. Rub the limbs *upwards* with firm pressure and with energy, using handkerchiefs, etc., for towels.

9. Replace the patient's wet clothing by such other covering as can be instantly procured, each bystander supplying a coat, waistcoat, etc.

Returning life is first usually discoverable by the symptoms of sighing, gasping, slight palpitation or pulsation of the heart. The efforts to restore life should then be redoubled, for the feeble spark still requires to be solicited and nourished into a flame, and it has often gone out from a relaxation of labor. A spoonful or two of warm wine and water, should be introduced into the mouth, as soon as the power of swallowing is sufficiently restored, which should be shortly succeeded by light, warm, and nourishing food of any kind, with gentle laxative clysters, a well-heated bed, and perfect tranquillity.

Apparent D ath from Lightning.—When a person is struck by lightning, strip the body and throw buckets of cold water over it from ten to fifteen minutes; inflate the lungs, as described in the directions respecting drowning, and apply continual frictions all over the body; apply also blisters to the breast, and administer stimulants, as brandy and sal volatile. In this case, nothing answers so well as electricity, and if a skillful person can be procured to administer them, gentle shocks should be made to pass through the chest, until returning life manifests itself.

As trees, haystacks, and other elevated objects serve to conduct lightning rather than ward it off, a person overtaken by a thunderstorm should never seek shelter near these; it is much better to get wet to the skin than expose one's self to this danger. It is also dangerous to stand near leaden spouts, iron gates, or palisades, at such times,—metals at all times having so strong a conducting power for lightning as frequently to lead it out of the course which it would otherwise have taken. When in the house, avoid sitting or standing near a window or door; the nearer you are placed towards the centre of the room the better.

Apparent Death from Exposure to Noxious Vapors.—Let the body be placed in the open air; dash cold water over the face, head, neck, and breast frequently, and let warmth be

gradually applied. If necessary, let the lungs be inflated according to the directions laid down in the article on drowning.

Apparent Death from Cold.—Let the body of the person be rubbed with snow, ice, or cold water, and after a while let heat be applied in the most gentle manner; then, if necessary, the means for restoring suspended animation from drowning may be resorted to. Nothing can be more pernicious than applying heat, either internally or externally, in the first stage.

Apparent Death from Hanging or Strangling.—Remove the tie or neck-cloth from the neck, place the body in the open air, expose the chest, and open a vein in the arm as soon as possible. If necessary, resort to the means recommended in restoring suspended animation from drowning.

In hanging, cut the body down, dash cold water upon it, open a vein, and apply stimulants liberally externally.

Apparent Death from a Blow or Fall.—Stunning, or insensibility, is usually caused by a blow on the head. It may be of greater or less severity, and requires prompt relief.

Treatment.—Place the sufferer in a recumbent position, with the head raised. Dash cold water from the hand over the face, or place a wetted handkerchief on the forehead; apply warmth to the feet and legs, and hartshorn or smelling-salts to the nostrils. Keep the patient quiet, and recovery partially or wholly will soon ensue.

Apparent Death from Hunger.—Great caution must be used in administering food. If fed too freely, a fatal result is probable. Injections of small quantities of milk, mutton-broth, or beef-tea may be used. When the patient can swallow, give drop by drop of warm milk, and increase the quantity till he can take a teaspoonful, when a few drops of brandy may be added. Small quantities of nourishment may be given every ten or fifteen minutes.

Abrasion of the Skin.—This is a wound of the skin caused by friction.

Treatment.—Remove any sand or dirt from the part by bathing it in warm water; then apply spirits and water to it till the pain is somewhat abated; lay a piece of dry lint over it, or lint wetted with water, and over that a piece of oiled silk to retain the moisture. If there is much pain or swelling from inflammation, apply a bread-and-water poultice, or a piece of linen moistened with goulard water. When this comes off, if the skin is not healed, dress with simple ointment. Or, take tincture of arnica or wolf's-bane, dilute it with twenty parts of water, or thirty parts where the skin is broken; apply the

liquid with a linen rag wrapped round the injured part. If this mixture should prove too strong, dilute it with more water.

Cut Throat.—The danger to apprehended in this case is death from hemorrhage; or, if the wound is sufficiently deep to open the windpipe, from suffocation, from an influx of blood into the passage. In the latter case, any pressure upon the part would but hasten the crisis; but, if the windpipe is not deeply wounded, this may be applied. Should there be a gushing out of dark blood, showing that a superficial vein is wounded, place the fingers on the course of the vein, a little above the cut, between it and the head, and keep a firm, though gentle, even pressure, there. If there is bright red blood coming forth in jets, an attempt should be made to tie the divided arteries, for it would be impossible to apply a sufficient amount of pressure to stop the bleeding. For directions, see page 350. It is possible that the windpipe may be severed without bleeding to such an amount as to produce death. In this case, place the patient on his face or on one side, with the neck bent forward, so that the blood will naturally take an outward direction; when it has stopped, do not at once close the wound, but put a piece of cambric lightly over it, and, at the end of three or four hours, stitch it up. Dress as directed for wounds.

Choking.—This accident, caused by substances getting into the gullet, or stopped between the mouth and the stomach, is extremely dangerous, and generally the effect of carelessness.

Treatment.—Slap the back smartly but not too heavily, and in the mean time let the person swallow some crumbs of bread, and drink a draught of water. Or, press a finger immediately down the throat as far as possible. Or, take large draughts of water, and make great efforts to swallow. The quantity of water distends the gullet above the lodged food, alters its position, and both water and food pass into the stomach with a sudden jerk. If the foregoing efforts fail, make a hook with a strong iron wire, or a thin and narrow flat piece of iron, sufficiently long not to slip out of the operator's hand. The hook should be covered by sewing over it a piece of wash-leather or tape. This is to be introduced into the throat, and by that means the obstruction removed. A strong emetic will sometimes effect the purpose when other means fail; mustard mixed with warm water is as efficacious as any.

Frost-Bite.—Lengthened exposure to the cold is apt to render parts of the body numb and inanimate. The fingers, toes, lips, nose, and ears, are especially liable to be affected.

Treatment.—To restore the natural warmth of the part

gradually must be the main object; and on no account must a considerable degree of heat be applied suddenly, as it would either kill the part outright, or cause violent inflammation to result. Friction with snow or cold water merely should be used, until the circulation is somewhat restored, and then equal parts of brandy or some other spirit mixed with cold water may be applied, until the restoration is completed. Frost-bites are apt to leave troublesome sores, which are difficult to heal. The red precipitate ointment is the best application; and, if much inflamed, they should be poulticed.

Sudden Accidents and Injuries.—These generally take place in traveling. The first thing is to remove any pressure on the body, and allow the air to come freely to the injured portion. If violent bleeding be perceived from any part, endeavor to arrest it, by placing on it a pad of folded linen and a bandage (see Fig. 107). Should it be a limb, and the blood be of a bright scarlet, tie a bandage tightly above the part; the tightness may be increased by inserting a piece of stick, and twisting it round, as in Fig. 108. Should no medical man be obtainable, the bleeding must be stopped by using a little hook called a tenaculum, the nearest approach to which is a shoemaker's sewing-awl. This is put into the wound, and the vessel from which the blood flows hooked and drawn forward; a piece of silk is then tied round the vessel, and if the blood ceases to flow, the wound is drawn together, and bound over with plaster. If blood is still ejected from the wound, there must be other arteries injured, which must be treated in the same manner before the wound be closed. Often pressure, long continued with the finger, will stop the bleeding, as in Fig. 109. If no wound be perceptible, and the lips and face pale, the hands and feet cold, lay the person out flat, apply warmth to the body, and administer a little brandy and water every few minutes, and afterwards beef-tea, for if the person has only fainted he will speedily recover; but

FIG. 107.



FIG. 108.

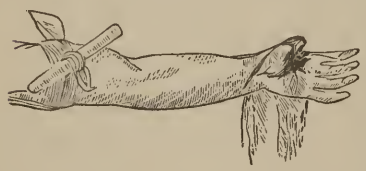


FIG. 109.

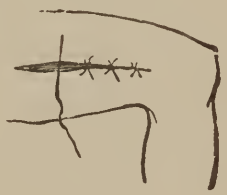


if the injury be greater, the remedies must be persevered in for hours, and every attention rendered. Should the effects proceed from a blow, that is, the person be stunned, then raise the head, apply warmth to the feet, and some pungent smelling-salts to the nose. If the flesh be cut, bathe with a sponge and cold water until all the dirt be cleared away and the bleeding stop; then bring the edges of the wound carefully together, and keep them so by strips of sticking-plaster (see Fig. 110). On the extremities, a piece of linen may be laid over the wound, and then bandaged. But should the wound be extensive, take a needle threaded with silk, dip it in oil, and enter the skin

FIG. 110.



FIG. 111.



about one-eight of an inch deep, tie each stich with a knot (see Fig. 111), and about thirty hours afterwards cut the silk, and draw out the thread. If the part have a throbbing sensation, bathe it with cold water. In cases where the flesh is torn, bring the parts gently together, and lightly strap them with sticking-plaster. If a part be bruised, let it remain as much at rest as possible: but, if severe, get the person to bed, and apply a cloth dipped in cold water every few minutes. Should the part bleed, the vessel can be tied as before directed. Many persons feel themselves shaken without any positive injury; but we would advise, in this case, that at least an hour's rest be taken on a couch or bed.

Cuts.—For small and simple cuts, treat as follows:

Tie it up at once with a piece of linen rag; this is usually sufficient to stay the bleeding. The small quantity of blood which may exude quickly dries up the wound, and forms a sort of glue which effectually excludes the air. As no better dressing can be used, it may be left on till the cut is well. If the bleeding should be excessive, it should be checked by the use of cold water or astringents, such as turpentine or Friar's balsam, and the edges of the cut surface brought firmly into contact by strips of sticking-plaster, and, if necessary, bandaged.

Cuts from the Flesh.—If a piece of flesh be cut out, wash it, and the part from which it was cut, without a moment's loss of time, replace it exactly in its proper place, and keep it there with a piece of sticking-plaster. If the piece can not be replaced, bath the part with cold water until the bleeding stops, and place over it a piece of soft linen, as directed on p. 350.

Stabs.—The danger of such accidents is, that there may be some important deeply-seated part injured. They are treated as common wounds: the bleeding stopped by cold water and a sponge, then the edges brought together with strapping, and bound up. If inflammation set in, foment with cold water for a day or two, then with warm water, and apply poultices. At times, when apparently healing, there will be a painful sensation; and matter formed below will force its way out; this may happen more than once. The patient should be kept quiet in bed for several days.

Bandy Legs.—A child is sometimes born bandy, but more frequently becomes so through being suffered to walk or stand before the legs have strength sufficient to support the body. In either case, the evil may be removed or considerably amended by proper care and attention.

Treatment.—Bathe the legs two or three times a day in bay-salt and water, and afterwards rub them briskly with the hand. Where sea-bathing can be obtained, it is of course the best; and where it is inconvenient to take the child to the sea, sea-water can be brought into the house for the purpose. With regard to irons, splints, bandages, etc., it is better not to apply these except under medical advice and supervision. In many cases the appliances will do more harm than good.

With females, bandy legs are more serious deformities than with males, as they are connected with malformation of the pelvis, and other bones which enclose the uterus, and so interfere with the formation, growth, or delivery of the fœtus.

Proud Flesh.—This is a name applied to the red granulations which often appear on the surface of wounds and ulcers. If they rise above the level of the skin they may be destroyed by a caustic application, such as the nitrate of silver or sulphate of copper (blue-stone); a few grains of red precipitate, or a little powdered lump-sugar. The first-named of the above is the most effectual, but care should be taken, in applying it, only to touch the spots themselves.

Ingrowing Nails.—It often happens that a tight or ill-made shoe, by continual pressure on one part of the nail, forces it into the flesh, and then causes great pain and inconvenience.

Treatment for the Toe.—First procure an easier shoe, which will allow the nail to take its natural course; then take a piece of glass, and with it scrape the whole length of the middle of the nail persistently, and yet with a delicate hand. By this means the centre of the nail will eventually be rendered so thin, that it may be readily bent, and in this flexible condition it gives way to the upward pressure of the skin on its outward edges, readily bends, and offers no further resistance. The cause of irritation being withdrawn, the tenderness soon heals, and the proud flesh drops down.

An ingrowing nail may be caused by an improper mode of cutting it. Nails should never be clipped at the corners, but cut straight across the top, if anything, slightly scopped in the middle. This leaves a sufficient amount of resistance at the corners; for wear what shoes we may, there must always be a certain degree of pressure on the nail, which should be provided for.

Treatment for the Finger.—Wrap the affected finger in a compress moistened with a lotion made as follows : Liquor of ammonia, one ounce; camphorated alcohol, one drachm; bay salt, quarter of an ounce; water, three quarters of a pint; mix, and shake well together. After ten minutes, remove this, and replace it by a compress anointed with camphor pomatum, and kept in place till next dressing by a rubber finger-stall drawn over it. Then dissolve one and a quarter ounces of camphor in a gill of brandy, wet a narrow band with this solution, place it round the root of the nail, and let it remain there until the next dressing.

The finger-nails should be cut of an oval shape, corresponding with the form of the finger; they should not be allowed to grow too long, as they thereby are rendered more liable to accident; neither should they be too short, as they thus deprive the ends of the fingers of their protection and support. When the nails are naturally ragged or ill-formed, they should be gently scraped, afterwards rubbed with lemon, then rinsed with water, and well dried with a towel. If the nails grow more to one side than the other, they should be cut in such a manner as to make the points come as near as possible to the centre of the end of the finger.

Dislocations.—By this term, we understand a displacement, by violence, of one part of a joint from its natural connection to the other. By a knowledge of the structure of the joint, we are enabled to lay down rules by which the displaced bone may be returned or reduced. The ligaments which have

been torn asunder re-unite, and the joint regains its healthy structure. The sooner this is done the better, and the easier will it be effected ; but the attempt may be made even after the expiration of three or four weeks, if in the larger joints. After this period, the displaced bone adheres to the part it is in contact with, and the attempt should not be made but by an experienced surgeon. After the reduction, inflammation of a mild character may follow, which the application of a few leeches will suffice to remove. The joint may be bound up lightly with a wet band, and cold water, or vinegar and water, applied.

Dislocation of the Lower Jaw.—Symptoms.—The mouth is fixed open, pain in front of the ear, and extending up to the temples. This state of the jaw occurs suddenly, while gaping, eating, or talking, while the jaw is in motion, and is apt to recur.

Treatment.—Place the patient on a low seat, cover the two thumbs with a silk pocket-handkerchief, pass the thumbs into the mouth, and press with force, slowly applied, on the last four lower teeth, and at the same time raise the chin, pushing the jaw backwards. Considerable pressure is required by the thumbs; two pieces of wood may be employed as a substitute for the thumbs.

Dislocation of the End of the Collar-Bone.—Either end of the collar-bone may be dislocated by a blow or a fall, indicated by a swelling over the joints which the bone forms either with the breast-bone or shoulder-blade, and by the suddenness of its occurrence. The treatment is very much lik that of the fracture of the collar-bone, to which reference must be made. A pad of lint should be put on the swelling, and the arm raised high in a sling. This accident will require three weeks' rest.

Dislocation of the Shoulder.— Symptoms. — Flatness of the shoulder, compared with the roundness of the sound side; inability to move the arm; the elbow placed at from two to three inches from the side; the attempt to press it to the side occasioning pain in the shoulder. If the fingers be passed up under the arm to the armpit, the head of the bone will be felt out of the socket, and may be revolved to make it perceptible.

Treatment.—A round or jack towel, through which the arm should be drawn; the towel carried up to the armpit and twisted over the shoulder, and the two ends thus twisted passed over the back of the neck, and fixed into a staple by a rope, or otherwise. Wash-leather, or other soft material, to be wound

around the arm, just below the elbow; a close hitch-knot of quarter-inch line made upon it. The patient to be placed in a chair and held firmly, or to lie down on a bed, and fixed. The arm may be drawn slowly and steadily, at an angle half way between horizontal and vertical, and the extension to be continued for ten minutes to a quarter of an hour,—during which, frequently, the surgeon or superintendent should raise the arm, near the upper or dislocated end, upward, with his two hands, with some force: the head will return into the socket with a sound or slight shock. If the head of the bone be thrown forward on the chest, the extension to be carried a little backward; if backward, a little forward. After reduction, a sling and three weeks' to a months' rest. The reduction may also be effected by laying the patient on the ground on his back, while the operator places his right heel in the left armpit (as in Fig. 112), if the dislocation occur on the left side; and his left heel in the right armpit, if it occur on the the right side, and makes a powerful extension on the affected arm by both hands.

FIG. 112.



Dislocation of the Elbow-Joint.—The elbow-joint consists of three bones—the bone of the arm spreading out across the joint, and the radius outside, the ulna inside. The mo. common dislocation is when both radius and ulna are throw. backward.

FIG. 113.



THE ELBOW-JOINT.

1, the Humerus, or upper bone of the arm; 2, the Ulna; 3, the Radius;—these two being the lower bones, they are all held together by ligaments connected with both extremities of the bones, and with the shaft; 4 marks the insertion of the external lateral ligament, which passes beneath into the orbicular ligament 5, of which the hinder part (6) is spread out at its insertion into the Ulna; 7 marks the situation of the anterior ligament, scarcely seen in this view; and 8 is the posterior ligament, thrown into folds by the extension of the joint. There are other ligaments not shown here: nor are the muscles by which the complicated movements of the joint are effected.

SYMPTOMS.—The joint motionless, a little bent; skin tight in front of the joint; a projection behind formed by the elbow,

which, with its tendon, is pushed back. The joint can neither be bent nor straightened.

Treatment.—Two men will be sufficient generally, unless the patient be very muscular. Extension to be made in a straight direction by both. The force required is not generally very great, and the reduction takes place commonly with a snap. Both bones may be forced forwards—when this accident occurs, the elbow is broken. The imperfect line of the joint will be readily observed when a comparison is made with the opposite joint.

Reduction.—Simple extension, as before; and, when reduced, the joint should be placed straight, and bound on to a splint. This accident will require from five to six weeks. Other accidents of this kind occur to the elbow-joint, but they may all be treated on the same principle, namely, forcing the bones back to their natural position, which may be ascertained on comparison with the opposite sound limb, or the limb of another person.

Dislocation of the Fingers and Toes.—Dislocation of the fingers and toes are of rare occurrence; and, when they do happen, it is generally between the first and second joints. They may be easily known by the projection of the dislocated bones, and reduced without much difficulty, if done soon after the accident.

Treatment.—Fig. 114 will show the method of reduction; the clove-hitch, made with a piece of stout tape, may be used if there is much difficulty; the wrist during the operation should have a slight forward inclination given to it. This will relax the flexor muscles.

Dislocation of the Wrist-Joint.—The hand may be forced backward or forward, but this accident is very uncommon. The nature of the case will be apparent to the slightest observation.

FIG. 114.



Treatment.—The hand should be grasped firmly by a powerful man, and drawn straight. If the hand slips, a bandage may be applied around it to aid the application of the extending force: but all that is required is full extension, by which the hand may be drawn straight. The same observation will apply to dislocation of the fingers.

Dislocation of the Hip-Joint.—These dislocations are very important and very numerous, being not less than four in

number. The hip-joint consists of the head of the thigh-bone and the socket formed by the pelvis, or continuation of the haunch-bone, toward the middle of the body. These accidents generally arise from a fall from a height, or a very severe blow, and are attended with severe injury to the structure of the joint and surrounding parts, although the consequences are not generally so severe as fracture of the neck of the thigh, detailed above.

The head may be thrown from the socket in four directions: First—upward and backward. Second—backward. Third—downward and inward. Fourth—upward and inward. The most frequent is the first—upward and backward.

Symptoms.—Shortening of the leg to the extent of about two inches. The foot is turned in, and lies over the opposite foot; the ball of the great toe toward the opposite instep; the leg cannot be turned out, nor the attempt made without pain. On examining the side of the buttock where the head is thrown, it will be felt on the bone, with the great projection formed by the end of the shaft of the bone, placed in front of it. If the leg is rotated, the head and the great process, or prominence (trochanter), will be felt to revolve also. The line of the thigh is altogether too far outwards.

Treatment.—A round or jack towel should be applied, as in the case of the dislocation of the shoulder, and drawn up around the thigh as high as possible, and twisted over the hip-bone somewhat tightly, and fixed behind into a staple. Wash-leather or a soft towel, to be wound around the thigh, about the knee, and around this the cord or line with two clove-hitches, one on each side of the thigh. The aid of six men will be required, who must draw very slowly and very cautiously. The patient should be placed nearly on the sound side, and the limb should be drawn a little across the other limb; and after it has begun to descend, yet a little more across the opposite leg. When the thigh is fully extended it will generally reduce itself, and may be heard to return into the socket with a snap. Should it not do so, the superintendent should take the thigh high up towards the trunk in his hands, and raise it, and use a round towel, passed under the limb and over his neck, and raise it, *twisting it outwards* at the same time.

Dislocation Backward.—Symptoms.—The symptoms are nearly the same, except that the shortening is less, and the turning in of the foot less also; but both the symptoms exist in a degree. The head of the bone lies lower down, and is less apparent to the hand when pressing on it.

Treatment.—The reduction is effected by the application of nearly the same means. The limb should, however, be drawn rather more over the opposite limb. When fully extended, it should be turned outwards, when the head will slip into the socket.

Dislocation Downward and Inward.—Symptoms.—The leg is a little lengthened, and is drawn forward on the trunk; or, if placed straight downward on the ground, the trunk will be bent forward as in a stooping posture; the toe points a little outward. The line of the thigh, when compared with its fellow, is directed too much inward toward the middle of the body, and also too far backward. The thigh should be moved in all directions, slightly, to ascertain that it is fixed in this position.

Treatment.—Apparatus applied as before, patient lying upon his back; extension to be made *downward* and *outward*, and when brought down, after some minutes' extension, the thigh should be forced in its upper end, outwards, by the hand, or the towel being placed between the thigh and drawn in the direction opposite to that of the dislocation, namely, upwards and outwards.

Dislocation Upward and Inward.—This is the most formidable of all these dislocations.

Symptoms.—The leg is shortened, and, like the last dislocation, drawn forward on the body, as though in the act of stepping to walk. Both these last symptoms are more strongly marked than in the former. A swelling, caused by the head of the bone, is apparent at the groin, and the bone is firmly fixed.

Treatment.—The same means as before, and nearly the same direction as the last accident, except that the limb should be drawn outward and more *backward*. These two last dislocations may be reduced in the sitting posture of the patient, and in that position drawn round a bed-post. A month's rest is required, or even more.

Dislocation of the Knee-pan.—The knee-pan (*patella*) may be forced off the end of the thigh-bone either outward or inward; but the latter is very rare. Displacement outward is generally caused by sudden and violent action of the muscles of the thigh.

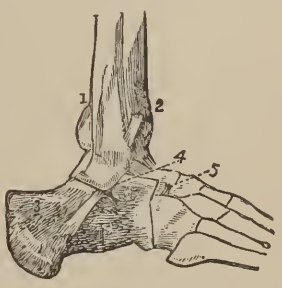
Symptoms.—The appearance of the bone on the outside of the knee joint, instead of in front, attended with pain, stiffness of the knee, and inability to walk without much pain.

Treatment.—The leg must be bent forwards on the trunk, and the knee straightened as much as possible; the bone is

then to be forced back by the pressure of the hand. When it is returned, the knee should be very slightly bent, and placed over a pillow. From three weeks to a month will be required.

The Ankle.—The ankle is the joint which connects the foot with the leg. It is called a hinge-joint, and is formed of the extremities of the large and small bones of the latter (1, 2), and the smooth surface of the *Astralagus* (3), a bone of the former, articulated together, and kept in their places by strong ligaments (4, 5).

Fig. 115.



Dislocation of the foot at the Ankle-joint.—The foot may be forced inward, outward, forward, and backwards. Of these the second (outwards) is by for the most frequent. It is generally accompanied by fracture of the small or outer bone of the leg, about four inches above the ankle-joint. On comparing the dislocated with the opposite foot, the distortion will be apparent.

Treatment.—The foot should be held firmly by a strong man, by the heel and by the front, and drawn steadily downwards, and forced back into its position. A little backward and forward movement of the foot or the ankle will facilitate its return.

The other dislocations may be ascertained by comparison with the opposite foot, and should all be reduced on the same principle, and by the same means, as the dislocation outwards, above described.

Fractures.—One of the commonest accidents, to which all are liable, is a fracture of one or other of the bones, which is often produced by a slight fall, or some other trifling accident, especially in very cold weather, when the bones are more brittle than at any other time.

Treatment.—The patient should be laid on a door or shutter, the limbs tied together or placed as near as possible in a natural position, and carried by two or four bearers. For a few days, a limb should not be "put up," but loosely bandaged in its proper posture, and an evaporating lotion applied till the swelling begins to abate. The consequence of a broken bone is the entire incapacity of the limb or the part to perform its functions in the economy, until the bone is not only united, but so firmly knit as to render it fitted for a cautious return to its duties. A bone requires for this purpose a period proportion-

ate to its size, bulk, etc., the extremes being from about three weeks to twelve—or what is termed *simple* fractures; but in *compound* fractures—where the soft parts about the broken bone are largely torn, communicating with the external air by a wound of the integument—these periods must be greatly extended.

Fractures of the Skull.—Little can be said on this subject, inasmuch that the injury is essentially dangerous in its nature, and the aid from surgery comparatively less than in ordinary fractures. It may be attended with deep sleep, snoring, and insensibility to pain, evidenced by pinching, &c., it may be inferred that a portion of bone is pressing on, or into the brain.

Whether the external skin be broken or not, an examination should be made, provided the situation of the blow be clearly indicated by the fracture being perceptible to the touch, or by blood being effused under the skin. A cut may be made two or three inches in length down to the bone; if arteries bleed, they should be seized with a pair of forceps and tied with a piece of silk thread, the ends of which may be cut off. When the bone is exposed, by one or two incisions as may be required, the depressed bone should be raised by a chisel, or some similar instrument, to its natural level; any pieces of separated bone should be removed entirely, the surface sponged clean, and lastly, the skin or scalp brought together; the hair around having been shaven off, the wound is to be re-united by sticking-plaster. Twenty-four hours after, when inflammation appears, give doses of five to ten drops of tincture of veratrum viride, every one or two hours, if the pulse becomes full, and the skin hot, and the brain excited.

Fracture of the Finger.—After employing extension, and thus bringing the ends of the bone together, place a small smooth piece of wood, or of gutta percha, on the under, and another on the upper side, and proceed to bandage somewhat tightly, so as to keep the finger extended; put the arm in a sling, and keep it so for a month. If the injured part swells and becomes painful, the bandage must be loosened, and a cold lotion applied; this is generally by no means a difficult case to treat.

Fracture of the Bones of the Hand or Finger.—These bones, which intervene between the wrist and the fingers, should be treated in the following manner: place in the palm of the hand, a soft, but firm, spherical body, and closing the fingers and thumb over it, in a grasping position, keep them so with a bandage; by this means the natural arch is preserved,

which it will not be if flat splints are applied. In this case, too, the arm had better be slung, and from a month to five weeks will be required to effect a union.

Fracture of the Fore-Arm.—May be either of the ulna or the radius, or of both: the former is the outer and thicker bone of the two (see Fig. 116), and the fracture of this does not much disturb the general outline of the arm; it may be broken at any part of its length, or at the elbow process, called *Olecranon* (3), or at (4). In the first case the plan will be to bend the elbow, and bring the hand into such a position that the thumb points upwards; use extension until no unevenness can be discovered in the course of the bone, and then apply two splints, the inner one reaching from the bend of the elbow to the tips of the fingers, and the outer from a little beyond the elbow to the middle of the back of the hand, which should be raised well towards the chest so as to make a sharp angle and draw the ulna from the radius. When the fracture is in this latter bone (2) the same method must be adopted, only that the hand must be depressed instead of raised, in order to keep the two bones apart. When these are both fractured, the setting is, of course, more difficult, and much time has often to be spent in extension and manipulation, before the four broken ends can be brought properly together. The splints should be put on as above directed, bandaging the hand firmly to the longer one, and placing it so that it is neither raised nor depressed, but in right line with the axis of the arm. When there is fracture of the *olecranon* there is little or no power of extension in the elbow, behind which a bony lump may be felt. A true osseous union in this case is scarcely to be looked for; but the injury will probably be repaired by a band of ligament. There is commonly inflammation and swelling, which must be reduced before pressure can be applied; the arm should be kept straight, and wet with cold lotion; and apply a splint as soon as it can be borne; let it be a long one, reaching on the inside from the shoulder to the hand. Bandage the arm in a straight position, beginning from the top, and making, as you go, extension downward, so as to get the broken bone into its place; it is long ere the limb is in a serviceable condition after a fracture like this. When the coronoid process is broken, the

FIG. 116.



THE FORE-ARM.

matter is more easily managed. The fore-arm must be bandaged in a bent position, and kept so. In about a month, slight exertion of the limb may be allowed, but there must be great care taken that it is not too violent.

Fracture of the Humerus, or upper arm-bone, very commonly takes place in the shaft, or any part of which, within an inch and a half of the extremities. It is easily detected by the mobility of the limb at the seat of the injury, and the patient's incapability of raising the elbow; the broken ends of the bone, too, may readily be felt, and the crepitation heard, when they are rubbed together. In this case, two wooden splints will be required—one to go before and the other behind; or if the arm is very muscular, four may be necessary to embrace it properly; they should be padded with tow, wadding, or lint, as here represented, and furnished with tapes, to buckle or tie, as may be most convenient. The padding should be placed upon a soft piece of cotton or linen, a little longer than the splint at each end, and three times as broad; turn in the ends and sides, so that the pad is a little larger than the splint every way, and about half an inch thick, and make all fast by tacking; place the turned-in ends of the cotton next the wood, so that there is a smooth surface presented to the skin. The tapes, three in number, are put on to the splints double, so that there is a loop at one end (1), through which, after it has encircled the limb, the other end is passed (2), then drawn tight and tied to remaining end (3), with a bow-knot, as shown in Fig. 118. A bandage, very easily loosened, may be made in this way of a strip of cotton or broad tape. The setting of the bone is not difficult in this case; the ends are easily brought together, and being so, the splints may be placed and made firm by the means of the looped tapes; these should not, at first, be drawn tighter than is required to keep the splints right, and prevent movement of the arm. After the first few days, when the swelling has subsided, a more permanent investment of the limb may be made. First give it a pretty firm roll of bandage, then place two splints, one on each side, of stout paste-board, gutta-percha, or leather, cut so that they will come down and cover part of the fore-arm, as represented by the

FIG. 117.

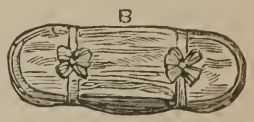
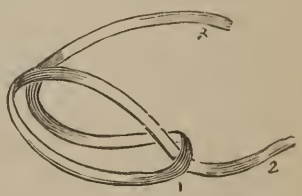
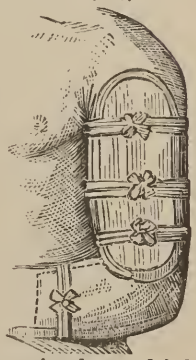


FIG. 118.



dotted lines in Fig. 119. The splints should have been previously shaped, or moulded, to the sound arm, and should be well fixed by more bandage, which, as it is rolled, should be brushed over with starch to prevent it slipping. Sometimes, where there is not much muscle, the starch bandage is alone used; but, in this case, the whole of it must be well saturated with strong starch, paste, gum, or white of egg, with strips of brown paper stuck down across the folds here and there. Care must be taken not to move the arm until all this is dry and firmly set. The hand and wrist must be supported with a sling, but the elbow had better hang free, as its weight will tend to keep the bone straight and the muscles extended.

Fig. 119.



Fracture of the Neck of the Humerus is that which takes place when the upper extremity, or head, is broken off. The symptoms here are very much like those which attend dislocation of the shoulder, and the treatment must be much the same. Draw down the shaft of the bone, and push up the head by means of a pad in the arm-pit; then bringing the arm close to the body, with the lower part at right angles with the upper, fix it to the chest by a splint on its outside, and a long bandage encircling it and the whole body, as shown in Fig. 120.

Fig. 120.



Fracture of the Condyles.—This is when the lower part of the humerus is the seat of the injury, the condyles being the rounded eminences which fit into the socket-like hollows at the head of the ulna to form the elbow-joint.

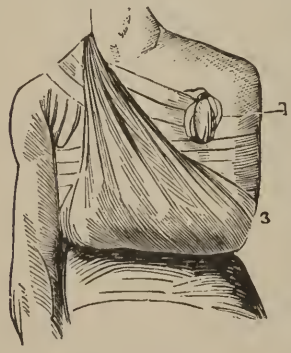
Treatment.—Bend the elbow to a considerable angle, and keep it so by means of bent splints of gutta-percha, or millboard, moulded to the shape, the first being softened by heat, the last by moisture. Bandage, and keep all quiet until adhesion of the bone takes place, then put the arm in a sling, and let it remain thus supported for a month or six weeks.

Fracture of the Shoulder-Blade.—This commonly happens near the neck, and is very likely to be confounded with

dislocation of the shoulder, or fracture of the neck of the humerus, like which it should be treated, only that the arm, instead of being drawn down, must be supported.

Fracture of the Collar-Bone.—This is, perhaps, one of the commonest accidents of the kind that can happen, and one of the most easily detected. It is generally occasioned by a blow on the shoulder, which falls forward, pushing the ends of the broken bone one over the other. The main object in the treatment must therefore be, to keep the shoulder back until the bone has united, and become sufficiently firm to do this without artificial aid. This end is accomplished by various means, but the following plan is the most simple and successful for unprofessional adoption (see Fig. 121). A wedge-shaped pad of any soft material—a pair of old stockings, for instance—is made, and put in the middle of a small shawl, or a large handkerchief; it is then placed well under the arm, but on the injured side (1); the ends of the envelope are brought, back and front, over the opposite shoulder, then crossed, and tied beneath the sound arm (2); another broad bandage of some kind is then passed several times round the body and injured arm (3), so as to bind the latter closely to the former in such a manner that the pad beneath the arm-pit acts as a fulcrum, and allows the outer end of the broken collar-bone to be pulled backward and outward during the process of binding, which, when completed, sets it fast in the right position. We have then only to envelop the whole of the fore-arm in a sling, and the apparatus is complete; it should be worn a month at least. If the arm exhibits a tendency to swell, it must be bandaged from the fingers upwards.

Fig. 121.



Sometimes the collar-bone is broken externally, near the point of attachment to the coracoid process. In this case there is scarcely any displacement of the fractured ends, and little need be done beyond keeping the patient quiet, and slinging the arm. In any fracture withinside of this point, the arm falls down, and is drawn inward, and the above should be the plan of treatment.

Fractures of the Ribs commonly result from a fall or blow, and may be complete or only partial, involving one or more of the bones.

Symptoms.—A sharp pain is felt at the injured spot, especially in breathing and coughing ; irregularity to the touch ; and distinct crepitation.

Treatment.—The chief risk involved is injury to the lungs, from the sharp ends of the bone and consequent inflammation. Leeches are sometimes applied to the seat of pain, and hot-bran bags. A band of stout cotton or flannel, from eight to ten inches wide, should be passed round the chest several times, beginning close under the armpits and going down to the end of the ribs. It should be drawn so tightly as to keep the ribs from rising and falling in the act of respiration. If inflammation follow, the pulse must be quieted by five to eight drops of tincture of veratrum viride, every one or two hours. The patient should be kept perfectly quiet, and on low diet, for a fortnight at least, assuming the position which is found most easy, which will probably be a half-sitting one, supported by pillows.

Fracture of the Lower Jaw sometimes occurs from a blow on the face, and in extracting a tooth. The nature of the mischief in this case is sufficiently evident; the grating is distinct, and the fracture can be felt. Professor Fergusson's treatment is the simplest and surest. Cut two narrow wedges of cork, an inch and a half long, a quarter thick at the base, and sloping away to an edge; place them between the teeth, one on each side; warm a piece of gutta-percha, or soften a piece of thick pasteboard in water, and mold it to the injured jaw, and keep in its place by means of either of the head-bandages figured bandage 343. This must be tight enough to prevent any motion in the jaw. The cork wedges will keep an open space between the teeth for the passage of food, which must be in a liquid form. The mouth should be rinsed frequently with a wash of tincture of myrrh and water, in the proportion of two drams of the former to half a pint of the latter.

Fracture of the Leg between the Knee and the Ankle-Joints.—The leg is composed of two bones, an inner larger (the tibia), an outer smaller bone (the fibula). One or both may be broken. The tibia is more frequently broken about two-thirds of the way down. It is detected without much difficulty by passing the hand down the line of the shin, although the displacement may not be great. It is not easy to detect a fracture of the fibula, nor is it of great importance to do so.

Treatment.—Extension must be made as in the other fractures, and sufficiently so to bring the broken surfaces together. The

old-fashioned straight splint would probably be the most readily available in domestic treatment. It is shaped as shown in Fig. 122, and should be sufficiently long to extend from a little above the knee to four inches beyond the sole of the foot. It may be quickly made out of half-inch board, planed smooth; the breadth should be about three inches; this must be padded throughout its whole length, except the notched end, which is to project beyond the foot, with tow, lint, or other soft material, taking care to have the pad thicker at the lower part, to suit the diminution in the size of the leg. This splint must be carefully placed against that side of the limb from which the foot exhibits a tendency to turn. We will suppose that a stout cotton bandage, about two and a half inches wide, and twelve inches long, has been provided. With this, beginning at the foot, and bringing it down from the instep between the notches at the bottom of the splint, envelope the limb evenly, fold over fold (as directed on page 342) up nearly to the knee, just below which a broad piece of tape should be passed, with the ends through the holes in the top of the splint, which ends are to be firmly tied at the moment when extension of the limb is made by an assistant; the bandage is then to be carried on over the head of the splint, and made secure. In Fig. 123 we see the limb, before this process is completed. When both bones are broken, it is generally necessary to apply the angular splint adapted to the ankle, of which Fig. 124 exhibits the outer and inner sides.

Fig. 122.



Fig. 123.

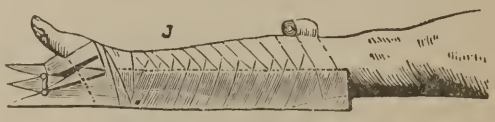


Fig. 124.



Fracture of the Knee-pan.—Sometimes happens from the mere muscular exertion of kicking or throwing out the leg violently. It may be at once detected by the depression in the bony plate, and separation of the broken fragments; these can not be kept in close apposition, and the injury is made good by a ligamentous band, which connects them. To facilitate this process, the leg should be kept in a straight position, above the level of the hip, so that the muscles of the thigh,

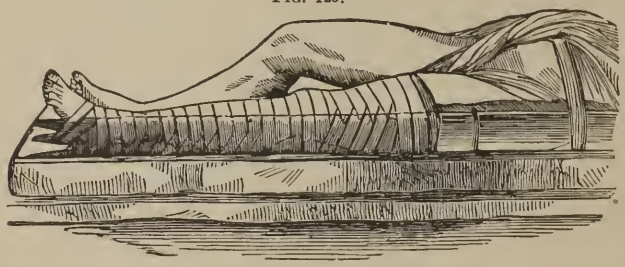
which are attached to the upper edge of the knee-pan, may be relaxed. A long splint, bound beneath the leg from the thigh to the foot, will effect this object. Over the broken patella, a piece of cotton is bound, and the knee is bandaged tightly above and below this, so as to bring the broken pieces as closely together as possible, and to keep them so. The bandage will have to remain on probably for two months, as a fracture of this kind unites very slowly. The knee is generally weak after, and it is best to support it with an elastic knee-cap.

Fracture of the Thigh.—This is a very serious accident. The bone may be broken just above the knee, in the shaft, or near the neck. In the first of these cases the nature of the injury is sufficiently obvious, as the broken bone can be felt beneath the skin. This also is the case with the second, in which, as in the third, there is shortening of the limb, and generally turning out of the foot. This accident may be readily distinguished from dislocation of the hip, by the mobility of the hip-joint.

Treatment.—There is always much difficulty in keeping the ends of the bone in apposition here, in consequence of the power exerted by the muscles of the thigh, which are constantly pulling lengthways and causing the ends to over-lap, or, as we say, "ride" upon each other; this is especially the case if the fracture is oblique. It is best to use the long straight splint first, in either of these cases, and to put it on with a light bandaging, gradually tightening it, to accustom the limb to the pressure. The splint must be made in the same way as that shown in Fig. 119, but much longer, reaching from the hip to beyond the toes. When inflammation has subsided, and the pressure can be borne, the case had better be treated in this way: let the patient lie on a hard mattress, with the leg extended and uncovered; then commence operations by bandaging the leg evenly from the toes to the knee; then place the splint, previously well padded, in its place, and make it fast with rollers to the foot, ankle and leg, taking care that the former is in the position which it is to occupy—that is, pointing straight upward; next, take a silk handkerchief, in the middle of which some wool has been rolled up, to make it of considerable thickness, and pass it between the legs, bringing one end up behind, and one before; these ends pass through the holes at the top of the long splint, and tie them as tightly as possible, without displacing the fracture. Then after confining the splint to the waste, with a bandage, insert a short stick between the loop of the handkerchief, and give two or three turns; this

will have the effect of shortening the handkerchief, and pulling down the splint, which will carry with it the part of the limb attached to it below, producing the necessary extension. Keep on at this until you find that the injured leg is as long as the sound one; and when this is the case, lay a short splint along

FIG. 125.



the inside of the thigh, and bandage tightly and smoothly, from the knee up to the hip. When it is completed, the patient will appear as in Fig. 125. The extension must be kept up for about six weeks, at the end of which time the fracture may be sufficiently united to bear the strain of the muscles upon it.

Fracture of the Pelvis sometimes occurs in falls from great heights, or in being run over, or having some crushing weight thrown on the body. When it occurs there is generally serious injury to the viscera of the abdomen and pelvis, indicated by the passage of blood from the bladder and bowels, The nature of the mischief in this case is not easily detected, and little can be done beyond enjoining perfect rest and to lowering diet, unless there are symptoms of collapse, in which case stimulants must be given.

Compound Fractures.—The term *compound* is applied to a fracture in which the skin is broken or torn, the wound of which communicates with the broken bone. This case is more serious and much more tedious than of common fractures, especially when the wound is large; but be it ever so small, it proves great violence and injury done to the soft parts, muscles, etc. Some weeks after the injury elapse before the bone begins to unite, in consequence of the large formation of matter that generally takes place, and the process of union of the bone does not begin until this action has ceased. During this stage, the patient becomes often seriously ill, and his vital powers are exhausted by the large quantity of matter poured out around and among the injured parts. In young and healthy persons,

in whom the injury to the muscles, etc., is not very great, these stages are not very strongly marked, and the cure proceeds more rapidly.

Treatment.—The wound must be healed, if possible, the edges being brought together by adhesive plaster. The splints, whatever bone may be affected, should be applied as in simple fracture, care being taken, however, not to press on the wound if possible, and this may be avoided by dividing the pad that lies over the wound, into two parts, leaving a space for the wound, which should be untouched; the pad should be very thick. A better method than this, however, is to divide the splint, and to connect the two parts by means of an arch of iron, so that the wound may be dressed without difficulty. This is called an interrupted splint. If the wound does not heal at once, the plaster may be removed, and a linseed-meal poultice substituted.

During the stage of formation of matter (suppuration), the patient will require tonic medicines, as bark, porter, etc., and small doses of opium at night, and nourishing diet, if the stomach will bear it; but this treatment should not be carried too far. Strong purgatives are injurious. The case will continue to progress very slowly for some weeks; abscesses may form; and, should matter collect under the skin so as to be felt on examination, or the skin become red and thin, the part should be punctured, and great relief will be afforded by its escape.

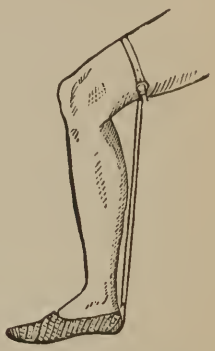
The splints should be removed as often as the matter renders the pads foul, or the wound appears to suffer from their presence; perhaps this may be required every other day, or even oftener. When the suppurative stage has passed, which may occupy from one month to two, the wound will look florid and healthy; and as soon as it begins to heal, the bone will begin to unite, but not until then. A month or five weeks will still be required before the union is complete, and two or three weeks yet longer before the patient is enabled to use the limb. The above periods refer to compound fracture of the thigh-bone. Compound fractures of other bones pass through these stages more readily.

Injuries to Archillis Tendo.—This is the great tendon which passes from the muscles of the calf down to the heel, upon which it acts with the whole force of those muscles. It sometimes happens that by a sudden jerk, or violent exertion, the tendon gets torn across, or ruptured, and great pain or lameness is the consequence.

Treatment.—On the first occurrence of the accident, if swell-

ing and inflammation ensues, apply three or four leeches, and encourage the bleeding for a time with warm fomentations, or a linseed poultice. Afterward resort to cooling lotions, as the following: Liquor of acetate of lead and tincture of opium, of each two drams; common vinegar, once ounce; distilled water, fifteen ounces; keep lint or linen rag wet with this lotion constantly applied. When the inflammation has subsided, if there be still swelling and stiffness, rub in, night and morning, this liniment: strong liquor of ammonia and tincture of opium, of each, one dram; spirits of turpentine and soap liniment, of each one ounce. If it is merely a *strain* of the tendon, a little rest and the above remedial measures will soon afford a cure; but if a positive *rupture*, there may be much difficulty in getting the parts to unite. To accomplish this end, it is best to use a slipper with a strap attached to the heel, which, passing up and encircling the thigh, may be drawn tight and kept so, as in Fig. 126. During the process of uniting, if the patient walk at all, it should be with a crutch; and after the cure has been effected, a high-heeled laced boot should be worn to protect the part.

FIG. 126.



Foreign Substances in the Eye.—Pieces of metal and other bodies often fly into the eye, causing great pain. Draw down the lower lid with the fore finger of the left hand, as in Fig. 127, and remove by a piece of moistened paper. If the substance be under the upper lid, place a bodkin across the lid, and draw back the lid so that it is completely inverted, as shown in Fig. 128. Inflammation is very apt to occur after these accidents. The eye should be well bathed with warm

FIG. 127.

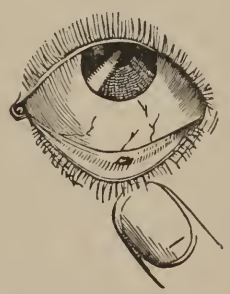
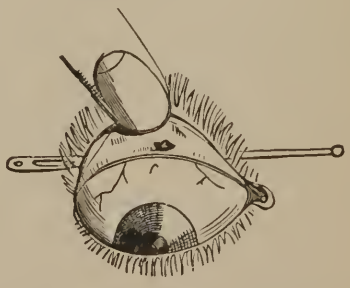


FIG. 128.



water several times a day, and afterwards an eye-water may be used, made of a dram of alum to a pint of water, two or three times a day.

Sprains or Strains are injuries done to ligaments, tendons and other structures surrounding the joints. They are produced by jumping, falling, or other causes which forcibly stretch or lacerate them. The joints most liable to sprains are the wrist and ankle joints. The wrist joint becomes sprained in consequence of the arm being naturally thrown out by persons in falling to prevent their being seriously injured, by which means the whole weight of the body is thrown on the wrists, which not only sprain those joints, but sometimes fracture them. The ankle-joint is frequently sprained by jumping from a considerable height, or the foot turning under the weight of the body. Sprains are attended with great pain at the time of the accident, and also with considerable swelling and discoloration of the injured part; the swelling and discoloration arising from the effusion of blood into the surrounding structures. The joints at first can be easily moved, but as the swelling and inflammation increase, all motions become painful, and the patient is unable to use the injured limb under any circumstance whatever.

Treatment.—The injured limb must be kept in a perfect state of quietude, and in such a position as to relax the muscles in connection with the affected tendons, as well as to favor the return of the blood to the heart. The patient must be kept in a recumbent position; evaporating lotions should be kept constantly applied to the injured parts, by means of linen rags wetted in the following lotion, and which should be renewed as often as they become warm:—

Take of goulard water, eight ounces; gin, four ounces; camphor mixture and mindererus spirit, of each two ounces; make a lotion, which should be kept in a cool situation until required for use. Tincture of arnica is an excellent application, or a poultice of arnica flowers.

This practice should be continued for the first twenty-four or forty-eight hours; after which period, should the swelling or pain increase, leeches may be freely applied to the parts affected, and the bleeding freely encouraged by means of a sponge and warm water constantly applied to the leech-bites. Hot fomentations should afterwards be applied by means of flannel wrung out of a decoction of camomile-flowers and poppy-heads, and the bowels kept in a free state by the following mixture: Take of epsom or rochelle salts one ounce, antimonial

wine half an ounce, mindererus spirit one ounce, syrup half an ounce, camphor mixture three ounces—mix. Two tablespoonsful to be taken every three or four hours until the bowels are freely acted upon. By this treatment the disease will rapidly subside, and the parts will return to their usual healthy condition in persons of sound health. The patient should not be allowed to make use of his limb too soon, as the irritation and inflammation of the joint will be kept up, and thus he may suffer from it for months, or even years. When all signs of the disease have disappeared, the motions of the part may be promoted by gentle exercise, and the following liniment may be rubbed night and morning:—Take of soap liniment one ounce, olive oil half an ounce, tincture of French flies half an ounce, mix; the parts may be afterwards supported by a roller, or it may be found necessary to envelope them in straps of soap plaster, in addition to applying the bandage.

Bites and Stings of Snakes, Insects, etc.—Bites of serpents and venomous reptiles are sometimes very troublesome. As soon as the injury is received, tie a piece of string tightly round the part, as near as possible to the wound, and between it and the heart, to prevent the return of the blood to this organ. Wash well with warm water, and place one end of a large quill, or small tube, over the wound, and keep sucking at the other, which will produce a vacuum, and act as a cupping-glass. Then thoroughly suck the wound, or soak it in hot water, to encourage bleeding from it; apply caustic, or cut out the bitten part, and give hot brandy and water, or some sal volatile in water, as a stimulant to the nervous system. The most efficacious remedy, administered internally in India, is a draught composed of thirty drops of solution of arsenic, ten drops of tincture of opium, a tablespoonful of lemon or lime juice given in a wineglassful of water, or peppermint-water, and clysters administered to purge, until the symptoms abate. If the symptoms are slight, the swollen parts may be well rubbed with a liniment of oil, turpentine, and liquid ammonia; also apply leeches and hot fomentations, with cordials to prevent fainting.

For the bite of the rattle-snake, give large quantities of alcoholic drinks—gin or whiskey; keep the body thoroughly saturated till the symptoms decline.

Bites from Insects.—Examine the parts with a magnifying glass, and extract the sting with a pair of pincers or forceps. Apply to the wound turpentine, hot vinegar, hartshorn, spirit, or eau-de-Cologne. Soap or camphor liniment may be

used to remove any swelling that remains. For the bites of bugs, fleas, gnats, musquitoes, etc., the best remedy is eau-de-Cologne, or some spirits, to convert the itching into a slight smarting; and the application of any strong perfume, such as lavender, a bitter infusion of quassia, wormwood, or gentian, will act as a preventive against their nightly visits. There are two great classes of insects which give rise to poisoned wounds: those which sting, as bees, wasps, hornets, ichneumons; those which suck, as the gnat, horse-fly, flea, bug, etc., and have a set of lancets at the mouth to pierce the skin.

Spinal Weakness and Deformity.—The weakness of the spine is generally connected with debility of constitution; the curvature of the spine, or the "growing out" at the system, and sometimes, from a habit of lolling about.

Treatment.—Administer such medicines as will give tone to the muscular system, and invigorate the health, such as steel, quinine, or cod-liver oil; aperients, if the bowels are confined. In the early stages other measures must consist of the shower-bath, with friction by means of a rough towel, sleeping on a mattress, exercise in the open air (short of fatigue), lying on the back after exercise, gymnastic exercise that shall bring into full play the weak side, and sea-bathing. If these means, steadily persevered in for some months, fail to do good, mechanical contrivances must be had recourse to under medical advice.

Wounds are either incised, lacerated, contused, or punctured. They are called incised wounds when they are made with a sharp cutting instrument, as when a shoemaker cuts himself with his knife, or a carpenter with his chisel. They are called lacerated when the flesh is torn, either by machinery, hooks, or other blunt instruments. Wounds are said to be contused when there is an irregular breach of surface, accompanied by injury and a bruised condition of the surrounding parts; they are generally produced by falls or blows of blunt instruments. Punctured wounds are produced by the forcible entry of sharp instruments, such as bayonets, swords, scissors, hooks, or the pointed ends of broken bones.

Incised Wounds consist of a mechanical division of the parts by a cutting instrument; all, therefore, that is necessary to be done, is to bring the edges of the wound nicely together, and maintain them in that position until union takes place. This is affected, if the wound be trifling, by means of straps of sticking-plaster, which should be so applied as to preserve the edges of the wound in apposition. Collodion answers admira-

bly. If the wound be of considerable extent, and bleeds freely, the first thing to be done will be to arrest the hemorrhage; this will be affected, if the bleeding vessels be small, by making pressure with a sponge for some considerable time. All extraneous matter should be cleared off, and the lips brought together; a piece of lint should be dipped in the blood and placed over its edges. This is found to be an excellent application, as the blood in drying, in consequence of its adhesive qualities, seems to maintain the union of the edges of the wound. In the course of four or five days, the parts will be found to be united, unless some accidental circumstances, such as too great a degree of inflammation or an untimely meddling with the dressings, should occur. The strappings or dressings should on no account be disturbed before the fourth, fifth, or sixth day, unless the parts should be in great pain or much swollen. If the incision takes place about the cheeks or lips, or other parts which are unsupported, and where sticking-plaster could not be applied, it will be necessary to put in two or three sutures, according to the extent of the wound. Should the parts swell, a cooling lotion may be applied, such as goulard water, and the bowels should be kept in a free state. Frequently the edges of the wound must be maintained in apposition by means of sutures.

Sutures are for the purpose of holding together the edges of a wound in soft fleshy parts that are loose and movable, where sticking-plaster would not, of itself, hold sufficiently secure. They consist of stitches, from half to three-quarters of an inch apart, between which strips of plaster are placed, and are not drawn out for several days if they do not irritate the part much; but if they do, then they must only be continued one or two days. The needle should be threaded with silk or hemp thread well waxed and flattened. It should always be borne in mind that the edges of wounds are never to be drawn together with any degree of strain or force to the parts, as then the process of healing will not take place. In what is technically called the interrupted suture, a stitch is taken straight through the edges of the wound, as in ordinary sewing, and then knotted. In the twisted suture fine steel needles, with flattened points, are passed through the edges of the wound; then silk is twisted in the figure of eight around them, as a boy twists his kite twine on a stick. It is better not to cut the silk, but continue each end down to the next

Fig. 129.



needle, and so on; secure the ends with a small knob of wax. Fig. 129 shows the mode of making and tying sutures.

Lacerated Wounds, in consequence of the great injury done to the parts, and from the fact of their not bleeding much, are very subject to active inflammation. If the wound be considerable and the parts much injured, the patient should enjoy perfect rest; the parts should be covered with cooling lotions (*see Prescription recommended in Sprains*), all dirt and extraneous substances being previously washed off; the bowels should be opened by the common black draught. If inflammation run high, leeches should be applied, and the bleeding encouraged by the application of hot water ; the cold lotion should now give way to fomentations and poultices; the patient should live low. When the inflammation has subsided, the wound may be dressed with basilicon or Turner's cerate. Erysipelas frequently follows lacerated wounds of the scalp; in this case the parts should be freely fomented with hot water, and the patient should take a fever mixture. Tetanus, lock-jaw, and spasm, often arise from lacerated wounds; in such cases opium should be administered in doses suited to the age and circumstances of the patient. One grain might be given every three or four hours until relieved.

Contused Wounds will require the same treatment as that already described. Cold applications in the first instance, and if inflammations sets in, leeches and hot fomentations. They generally terminate in suppuration and sloughing, or mortification of the parts, according to the extent of the injury. In order to expedite these processes, poultices of bread and water, or linseed-meal, should be applied three or four times a day, and when the abscess opens or the slough is thrown off, they are to be treated as common ulcers with basilicon or some other stimulating ointment, for the purpose of promoting healthy granulations, and thus healing them. During the active stage of inflammation, the patient should live sparingly; but tonics, such as quinine, and a generous diet should be allowed under the stage of suppuration or sloughing.

Punctured Wounds.—Punctured wounds are extremely dangerous—much more so than the others already described. A punctured wound from a nail, hook, or any other pointed instrument, gives rise to inflammation of the absorbents (a set of vessels running from the wound into the neighboring glands), and is manifested by red lines taking the course of these vessels. Abscesses of the glands, and of other parts of the body, in their course, frequently ensue; and if the matter be deep

seated, such a degree of irritative fever is produced as to cause death.

Lock-jaw (tetanus) and frightful convulsions are often the result of tendons or sinews receiving punctured wounds. In the first instance the puncture should be laid open with the lancet, cold lotions should then be applied, and if inflammation sets in, the parts should be covered with leeches, according to the age and strength of the patient; the diet should be sparing, fomentations and poultices should be constantly applied, and the limb should be supported on an inclined plane, in order to favor the gravitation of the blood towards the body. All stimulating drink should be cut off. The bowels should be kept freely open, and the patient should observe perfect rest. As soon as matter has formed, it should be let out by free incisions with the lancet, after which the parts should be poulticed three or four times a day. In order to allay irritation and pain, and to procure sleep, great advantage will be derived from the administration of ten grains of Dover's powder, at bedtime.

Gunshot Wounds.—When a ball enters the body, the wound appears somewhat smaller than the ball itself; its edges are ragged and inverted, and the part around has a bluish or black color from the bruise. When it passes through the part, the aperture by which it makes its exit presents quite a different appearance. It seems somewhat larger than the ball, the edges are everted, and there is little discoloration about the wound.

Treatment.—Excessive bleeding is not so common after gunshot wounds as after other kinds; but it sometimes occurs, and may be fatal if not attended to. Where it can be done, the finger should be inserted into the wound, and pressed upon the vessel, otherwise a handkerchief should be tied very tightly round the limb above the wound. It is well to examine the wound as early as possible, in order to ascertain the amount of injury; at least, so far as this can be done without aggravating the case. The ball or other foreign substance ought to be removed, if that can be easily effected; but otherwise, it ought, in the mean time, to be let alone. As the walls of the wound slough and suppurate, the opening will become larger, and it may then fall out or be easily removed. Sometimes it may remain embedded in the tissues, without producing much or any inconvenience. If, after the sloughing and suppuration, the ball remains fixed, and if much irritation continues to be excited, and abscesses form about its track, then it may be necessary to find out its seat, and

use every means to remove it. The simplest dressings should only at first be applied; sponge and bathe well with water, to stop bleeding and cleanse the wound; then apply a piece of lint crossed by strips of plaster. The agitation of the patient should be soothed by a few spoonfuls of wine or spirits; but, if he suffer much in his mind, an opiate may be administered. Afterwards wet a few folds of linen with a simple lotion, apply it to the part, and lightly bandage. Keep the patient quiet, and let him remain in bed. A few days after, moisten the clothes with warm water, and remove them. Inflammation will now have set in; if the patient can bear it without producing a chilly sensation, dress it with cold water. On suppuration being well established, apply mild stimulating lotions, or poultices, and bandages. When matter forms beneath, it must be let out by the knife if poultices will not do it; its accumulation may often be prevented by compression. Low diet, purging medicine, and quiet, are great assistants to recovery. If the party be stout or in full habit, and the wound severe, then it must be bled. Leeches will allay the inflammation, and if there be much pain, opiates should be given at night. Pieces of clothing or wadding should be extracted from the wound. If a ball lodges in a bone, it may require a chisel to remove it. If a bone be severely splintered, then amputation becomes necessary.

Thorns, &c., in the Flesh.—It is very common for the hands, feet, or legs to be pierced by the forcible intrusion of small pointed substances, as thorns of roses, thistles, etc. If such be immediately and entirely extracted, the accident is seldom attended with bad consequences; but if any such pointed substance penetrates the body, or even a part of it be left in the flesh, it causes inflammation, and sometimes a considerable abscess.

Treatment.—If the thorn, etc., can be taken hold of easily, remove it with a pair of forceps; if not within reach, apply a bread-and-water poultice, and continue to do so until the intruder is removed. If suppuration has not been prevented by the immediate extraction of the offending substance, the abscess caused thereby should be opened immediately it has formed. Sometimes the thorn, after painfully penetrating through the skin, enters directly into the fat, upon which the pain ceases, and the patient begins to congratulate himself that the cause is removed. Nevertheless, some days afterwards—or in other instances, some weeks—fresh pains are excited, followed by inflammation and abscess. This condition is to be treated with bread-and-milk poultices and seasonably opened.

Crushes or Jams.—If the part be so severely injured as to threaten sloughing, or a separation of the flesh from the bone, tepid water or poppy fomentation should be applied. Tincture of benzoin, or Friar's balsam, on lint, is highly useful, sealing up the wound, as it were, from the contact of air, and disposing it to heal. If the fingers or toes have been severely crushed so that it may seem impossible to save them, they should not be too hastily amputated, as they often recover under favorable circumstances, long-continued rest being essential. In other and more simple cases, apply a bread-and-water poultice, or a piece of folded linen rag, or spongio piline dipped in cold water. If there be pain, heat, redness, swelling, or throbbing, then there is inflammation or the formation of matter; keep applying cold water fomentations for the first thirty-six hours, all bandages being lightly tied; after that time put the part in a hot-water bath, or foment with hot-water and apply poultices. Openings are to be made, if necessary, to prevent the lodgment of putrid blood and matter.

Cupping.—Cupping is the application of cupping-glasses, from which the air has been previously extracted, to the skin, with the view of attracting blood to the part, and, if necessary, abstracting it. Dry or wet cups (that is, without cutting, or after using the scarificator) are very useful means of drawing blood. If the part to which the application is to be made has hair upon it, it should be freshly shaven, and then moistened in warm water. A portable spirit lamp is to be made by a bit of sponge, or rag, wound on a piece of stick, and dipped in alcohol. The cup is to be brought near the patient, then quickly placed over the flaming sponge, and rapidly applied. After suffering the cup to remain a few minutes, it is withdrawn by depressing one edge, and the part scarified. The cup is then re-applied.

If no scarificator can be had, a few cuts with a sharp lancet will answer the purpose, and the place of cups may be supplied with a small tumbler. Good brandy can be substituted for alcohol.

After the operation, the wounds should be closed with lint and plaster, and pressure should be kept on the part for some days, in order to prevent secondary hemorrhage. Cupping is preferable to any other method of blood-letting in many kinds of inflammatory disease.

Vaccination.—In the minds of many persons there is a great prejudice against this operation, and they will often risk the legal punishment due to them for evading the law, rather than submit their children to it; but if they were better in-

formed they would not so act. The statistics of different visitations of smallpox show that the mortality of those attacked who have not been vaccinated is one in four, whilst those who have, it is not one in four hundred and fifty,—a strong argument this for vaccination. The operation is usually performed by making an oblique puncture through the epidermis and introducing a portion of the virus on the point of a lancet or needle. If the operation has been successful, a small inflamed spot is discernible about the third or fourth day. This increases in size, becomes hard and elevated, and about the sixth day a small quantity of fluid may be distinguished in the centre. About the eighth day, when the pustule is fully formed, the constitutional effects begin to appear—headache, shivering, loss of appetite, etc., which gradually subside in one or two days. Afterward the fluid dries up, and a dark brown scab forms, which remains for about a fortnight, and on disappearing leaves a depression. It is a disputed point whether the effects of vaccination are permanent or whether they disappear after a certain time. The majority seem to be in favor of the latter opinion, at least to the extent of recommending that persons who have been vaccinated in infancy should be re-vaccinated on attaining maturity. From the operation being imperfectly performed, or from other causes not well understood, vaccination does not in all cases afford absolute immunity from the disease; but in those cases in which it does occur it is almost always in a very mitigated form.

How to apply Leeches.—The part and the leeches also should be carefully wiped, and if to be confined to a particular spot, put them in a wineglass or pill-box, and hold over the part until they bite. If they are put on by hand, hold their tails with a wet cloth; should they not bite, put them into cold water for a short period. If the part be moistened with sugar and water, cream, sweet beer, or prick slightly, so as to draw blood, will often induce them to take. When they fall off full, put them on a plate, and sprinkle salt over them, or take them by the tail and draw them through the thumb and finger, that the blood may be thoroughly pressed out, which will squirt from them. Put them into plenty of cold water, that they may wash themselves well; then place them in a jar with a little moss, and cover it with a piece of muslin, and keep them in a cool place. After bleeding with leeches, sponge off the clotted blood, and put on a bread-and-water poultice, which renew every half hour, to encourage the flow of blood. Should the leech-bites not heal but continue bleeding, so that the person

become faint, and the lips and face pale, make pressure with the finger over the spot, or apply caustic. If these means fail, take a strong needle and thrust it through the skin on each side of the wound; that is, right through the bite; then wind a piece of thread—silk, if at hand—round and round the wound, under the ends of the needle. This will raise it up like a small spot; in twenty-four hours cut the silk, and carefully draw out the needle. Try a small piece of lint, dipped in the tincture of iron, pressed on the bite for a few minutes, or a leaf of the Indian hemp. Never put them on the eyelids. If leeches stick too long, never pull them off, but touch them with salt.

How to Draw Teeth.—The single teeth may be easily extracted by grasping them firmly, and as low down on the gum as possible, with a small pair of pliers or forceps. Do not press heavily on the sides of the tooth, or it may be crushed or broken off; give a rotatory motion at the same time. The double teeth are generally drawn with an instrument dentists call a key instrument; this has a claw to seize the tooth and press it against a bolster, it then acts as a lever; but with a strong and steady hand, most of the teeth may be drawn out with the forceps.

After a tooth has been drawn, sometimes a severe bleeding takes place from an artery; to arrest this try a strong solution of nitrate of silver or powder of Indian hemp; if this be not successful, clear the hole of the clotted blood, and press into it a piece of lint, made thin at the end, so that it may reach the very bottom, fill it with lint the height of the gum, then put upon it a bit of cork, or a few folds of linen, so that when the mouth is closed the teeth opposite the hole may rest upon it, then bandage over the chin to the top of the head, to keep it firm.

Issues.—Sometimes it is necessary to create these ulcers to draw matter away from certain parts. The skin and fat are nipped up between the finger and thumb, and then divided with a lancet so as to admit a pea, instead of cutting; the sore is sometimes made with a blister or caustic, and the pea is smeared in ointment of yellow resin. The pea is held in its place with common diachylon plaster. If inflammation appear, aperient medicines must be given, and the issue dressed with ointment of wax.

How to Avoid Accidents.—Although we can not altogether prevent accidents, yet we may, with a little ordinary prudence, lessen the chance of their occurrence, and an observance of the following simple rules will assist us to do so:—

1. Be very cautious when on the water or in its vicinity; more sudden deaths occur by drowning, and more diseases originate from colds caught by immersion and exposure in wet habiliments, that perhaps from all other causes put together; therefore, be careful, if in a boat, to remain still, and so as not to destroy the equilibrium of yourself or the boat; be cautious of hoisting a sail in squally weather, and give a wide berth to any advancing vessel. Step not from one unsteady boat to another, or on to a floating pier, nor walk across a narrow plank without securing good hold on some support. When on land, step not too near the brink of a lake or river; it may be loose or crumbly, or a sudden gust of wind may cause you to lose your balance. When bathing, beware of eddies in the current, especially if you can not swim; do not venture beyond your depth in the latter case without such support as corks or bladders, and in no case attempt to bathe when in a heated state, or immediately after a full meal.

2. Do not stand beneath a tree in a thunder-storm, or by an iron palisade or spout, whether of iron, zinc, or lead; go not very near lightning conductors, tall chimneys, or lofty erections of any kind. If in the house, keep away from the fireplace, looking-glasses, and windows, whether open or shut, as well as from doorways through which the electric fluid might escape, if it entered by the chimney. A bed in the middle of the room is the safest place, as blankets and sheets are non-conductors.

3. Loaded firearms should be put in safe places, out of the reach of children; never play with them, and pretend to fire them at any one. Do not keep guns or pistols loaded at all, unless you have some particular occasion for it. When carrying a gun let the muzzle be always pointed toward the ground, and, if you have occasion to pass it through a hedge or fence, look that there is no one in line with the barrel in the direction in which it points. Do not overload a piece, nor fire it with a foul barrel. Be very careful of gunpowder, and by no means smoke a pipe or cigar when you have much about or near you.

4. Do not sleep near lime-kilns, nor lay by burning charcoal. If drowsiness should come on while in such situations, leave them, and go out into the fresh air.

5. In felling trees, keep out of the line in which they are likely to fall.

6. In severe weather, if obliged to be exposed to the cold, do not lie down to sleep, although you may feel an inclination to do so. Keep moving about while you have power, and apply friction to the numbed parts of the body; take up some snow

in the hands, and rub them well together. When in a partially frozen condition, you have an opportunity of approaching a fire, do not do so too hastily, but get into a higher temperature by degrees.

7. Beware of damp beds, and of clothes damp with perspiration, especially of sitting in them in a cold atmosphere, or in a draught of air from an open window. Clothes from the wash should always be well aired, and such as have been long out of wear, especially if kept in a room without a fire. Beware also of new buildings, of which the walls are not sufficiently dry; if they "sweat," as it is technically called, they are unfit for habitation.

8. Go not into vaults or cellars that have been long closed, or wells or other confined places, until you have introduced a lighted candle therein. If the flame burns brightly, you may be sure there is no excess of carbonic acid gas; if it goes out, or burns dimly, the air is unfit to breathe. Throw in some lime-water to neutralize the carbonic acid, and introduce fresh air as soon as possible.

9. Let all horses, draught or saddle, be secured before leaving them, and beware of vicious horses, some of which will bite as well as kick. Be cautious of an animal whose disposition you do not know. Bulls and boars are uncertain, and dangerous, and strange dogs are not to be trusted; the bite, and even the scratch of a cat has resulted fatally.

10. In nurseries and other places where there are children, always keep iron guards before the fires; and even then, do not leave the children by themselves, on account of their well-known propensity to play with fire. For the same reason leave them not alone with lamps or lighted candles, and put lucifer matches out of their reach, and also kettles, or any vessels containing hot water.

11. Never allow open candles to be carried about the house by servants or children; and if light is burned in the night, place it so that the flame could not, were it to fall aside come in contact with any combustible materials. Turn off singly the taps of all gas-burners. If you smell an escape of gas, do not approach the place where it is likely to be taking place with a lighted candle until plenty of air has been admitted.

12. Put a label with the word *Poison* on all bottles and packets containing corrosive or other preparations of a hurtful character; and even when so labeled, do not let them be about in the way of children or ignorant persons. If there is occasion to place rat or beetle poison in the house, let it be in out-

of-the-way places, and be careful to take it up and destroy it in a short time, should it not be taken by the animals it is designed to destroy.

Many other cautions might be given. We might speak of leaving trap and other doors open, and wells uncovered; of leaning too far out of windows; of chopping and sawing wood, and using edged tools of any kind in a careless manner; but it is scarcely necessary to occupy our space by mentioning these, although they all contribute to swell the chapter of accidents which forms part of the history of every life.

Wens.—A wen is a tumor mostly situated on the head or neck, and containing a suetty or curd-like substance. They are usually harmless; and except from their situation and unsightliness, do not require interfering with.

Treatment.—The most certain mode of proceeding is their being extirpated by a surgeon; the operation is neither difficult nor dangerous.

1. Take of the compound tincture of iodine, from five to ten drops three times a day in a little water. Apply also the following ointment night and morning: iodide of potassium, one dram, to be rubbed very fine and dissolved with a few drops of water; lard, one ounce; camphor (finely powdered), half a dram. Mix.

2. Paint the wen over with the compound tincture of iodine for a time, and afterwards bathe it with the following lotion: muriate of ammonia, half an ounce; spirits of wine, one ounce; elder-flower water, three ounces. Mix.

3. Dissolve forty-eight grains of iodine in one ounce of pure spirits of wine. Give to an adult ten drops of this tincture in half a wineglassful of capilliare and water every morning fasting, give a second dose at ten o'clock, and a third at bedtime. At the end of the first week the dose may be increased to fifteen drops three times a day, and a week afterwards to twenty drops.

Whitlows.—Whitlow is an inflammation of the extremity of the fingers, which is usually caused by a small quantity of humor being stagnant in that part,—whether this has happened in consequence of a bruise, a sting, or a bite.

Treatment.—As soon as the disorder is manifest plunge the finger affected into water as warm as can be borne, and keep it there for some time, adding hot water every now and then to keep it the desired heat; also direct the steam of the hot water into it; doing it constantly for the first day, will often dry the whitlow away. Or, apply to the whitlow compression

with the hand in a degree which can be easily borne, with the view of preventing the formation of matter, then bind it round with a narrow fillet. Repeat this three or four times in the course of two days, when in all probability the pain and swelling will disappear, leaving a single speck of matter at the point of the finger, immediately under the skin. If vent be given to this by the slightest touch of the needle, the wound will heal up immediately. When an abscess cannot be prevented, a poultice of bread and milk should be applied to favor the formation of matter, and as soon as the abscess is ripe, or what is termed "come to a head," it must be opened with a lancet; afterwards dress the wound with tincture of calendula.

Rupture (*Hernia*).—Children and old people are most liable to this, though sometimes they occur to persons of middle age. If difficult, or impossible to be returned, it is called strangulated rupture, and requires the best assistance.

Causes.—In children, excessive crying, coughing, vomiting, or the like. In adults, it is commonly the effects of blows, or violent exertions of the strength, as leaping, carrying great weights, etc. In both, a relaxed habit, indolence, and an oily or moist diet, dispose the body to this affliction, by weakening the skin.

Symptoms.—The outer part of the belly cracks, or tears, and a part of the gut protrudes through the aperture.

Treatment.—The patient must be laid on the back, the head low, and the buttocks raised; while in this position the gut must be returned by a gentle pressure, if it does not fall back of itself. After it is returned, a piece of sticking-plaster may be applied over the part, and a truss, or bandage, worn for a length of time. If it has been forced down with great violence, or happens from any cause to become inflamed, it is often very difficult to return it, and sometimes impracticable, without an operation, a description of which is foreign to our purpose, but in those cases, until some assistance can be obtained, act as follows: foment with warm fomentations; give clysters; then when the bowels have emptied, the operator must press and guide the gut back through the aperture, if possible to do so. An adult, after being ruptured, should never neglect wearing the proper truss.

Foreign Substances in the Nose.—Sometimes foreign bodies, such as pieces of tobacco-pipe, etc., get pushed up the nose by children. If it is a bean, or anything which swells by absorption of moisture, the extraction is a matter of great diffi-

culty. This should not be attempted by other than a professed surgeon; yet if the assistance of such cannot be readily obtained, the effort may be made by means of the flat end of a probe or a silver bodkin, bent in about the eight of an inch at the end, and the instrument then introduced and passed beyond the object, so as to draw it out as with a hook, when the foreign body has not penetrated far. If the opposite nostril is closed, and the child is made to blow the nose violently, it may sometimes be driven out.

Foreign Bodies in the Ear.—Insects occasionally make their way into the external ear, particularly in children, when lying on the grass. They sometimes produce horrible torture by irritating the drum of the ear.

Treatment.—Let the child recline with the opposite ear upon a pillow, and fill the affected one with sweet oil. There is no insect that will not perish, or make good its retreat, when this method is pursued.

Solid substances are frequently pushed into the ear by children, where, if large, they sometimes occasion much inflammation, and become firmly wedged by the swelling. Great danger of destruction to the drum and small bones of the ear results from awkward attempts at removing such substances, by which they are driven still deeper into the canal. If the foreign body have any visible projecting point, of which a firm hold can be taken, this may be seized by forceps or pincers, and the body removed directly; but when the substance is rounded, or formed with many faces, or extremely smooth and cylindrical, it is very wrong even to attempt its removal by any such means. Cherry-stones, apple-seeds, common beads, garnets, bugle beads, and pieces of red coral, furnish many cases in point.

If we attempt to seize them in front, they instantly slip farther in, and endanger the drum. We must get behind them and hook them out, always proceeding with great caution. Sudden and severe pain warns us when we touch the drum of the ear, and then all considerable pressure in the inward direction must cease. When the foreign body is small in proportion to the size of the canal, it may generally be removed by means of the little steel ear-picker on the handle of the common pocket tweezers; but, when larger, the eye of a fine bodkin or silver probe should be gently curved and inserted beyond the body to draw it forward. A few drops of sweet oil, previously dropped into the ear, will very much facilitate the operation.

As children sometimes fancy things have got into the ear

when they really have not, it is best to institute an examination before attempting their removal. This may be done by drawing the upper lobe of the ear upward and backward, which will have the effect of straightening the curved passage so that the eye can discern the drum at the bottom, unless there is an interposing object.

So many substances of a poisonous nature being used in manufactures amongst farmers, and also in private houses, it will be useful to have a guide to refer to in case of accident; for, in almost every case of poisoning, the remedy must be given immediately, or we cannot expect to succeed. We give here the names in common use, and under one head we include various articles made from the same substance. For instance, to the word *Mercury* you find calomel, corrosive sublimate, white precipitate, vermilion, which are all mercury, but in different forms.

As a general rule, in all cases of poisoning, especially if seen immediately after the poison has been swallowed, the person should be made to vomit. To accomplish this give a teaspoonful of mustard in a tumbler of warm water; or two or three spoonfuls of alum in the same way.

Arsenic.—(*Scheele's green, ague-drops, rat-poison, etc.*)—Symptoms.—Pain and burning heat of stomach, dryness of throat, cramps, purging, vomiting.

Treatment.—Give large quantities of milk, and raw eggs, lime water, or flour and water; then castor-oil.

Antimony—(*Butter of antimony, tartar emetic, etc.*)—Symptoms.—Severe vomiting, cramps, faintness, purging.

Treatment.—Plenty of strong tea. If you have no common tea at hand, use an infusion of oak, elm, currant, or blackberry bark or leaves. Or for butter of antimony, use the treatment given below for *Acids*. Support the strength.

Acids.—(*Oxalic, sulphuric* (oil of vitriol), *nitric* (aquafortis), *muriatic* (spirit of salt), *but not prussic acid.*)—Symptoms.—Horrible burning, sour pain from the mouth downwards. The skin of the lips, mouth, and throat, is dissolved. Purging of blood, great thirst.

Treatment.—Put an ounce of calcined magnesia into a pint of water, and give wineglassful every two or three minutes. If the magnesia is not ready, use whiting, chalk, soda, or lime-water, or knock a piece of plaster off the wall, pound it small, and give it in milk or water. While one person attends to this, let another cut some common soap into small bits, and give a teaspoonful with water, or a tablespoonful of soft soap. Give plenty of warm water to drink.

Bad Fish.—(*Mussels, etc.*)—SYMPTOMS.—Pain in stomach, headache, flushed face, feeling of choking, perhaps scarlet eruption of the skin.

Treatment.—Empty the stomach by an emetic (as in poisoning by laudanum), then give a full dose of castor-oil with some warm spice. A mustard-plaster to the pit of the stomach if needful.

Chloride of Tin.—(*called Muriate by dyers.*)—SYMPTOMS.—Vomiting, pain in the stomach, purging, convulsive twitching.

Treatment.—Give large quantities of milk, with magnesia, chalk, or whiting in it; also raw eggs beaten up with water or milk.

Chloride of Zinc.—(*Burnett's disinfecting fluid, white vitriol.*)—SYMPTOMS.—Same as chloride of tin.

Treatment.—Plenty of milk, with whites of eggs in it.

Copper.—(*blue copperas, blue verditer, mineral green, verdigris, food or confectionery cooked in foul copper vessels, pickles made green by copper.*).—SYMPTOMS.—Coppery taste in the mouth, tongue dry and parched, very painful colic, bloody motions.

Treatment.—Large quantities of milk and whites of eggs, afterwards strong tea. Don't give vinegar.

Corrosive Sublimate.—(*see Mercury.*)

Cocculus Indicus.—(*see Poisonous Plants.*)

Green Vitriol.—(*sulphate of iron*).—SYMPTOMS.—Pain, sickness, burning heat of the stomach.

Treatment.—Give an emetic, afterwards magnesia or carbonate of soda and water.

Iodine.—(*iodide of potassium, or soda, or iron.*)—SYMPTOMS. —Burning pain in the throat, heartburn, vomiting, very likely salivation.

Treatment.—Large quantities of cold starch and water, or flour and water.

Lead—(*acetate or sugar of lead, red lead, white lead.*)—SYMPTOMS.—If taken in large quantities, metallic taste in the mouth, pain in the stomach, painful vomiting, often bloody, and hiccough.

Treatment.—Put two ounces of Epsom salts into a pint of water, and give a wineglassful every ten minutes, till it operates freely. Taken in small quantities, either by drinking water out of a new lead cistern, or one newly repaired with white lead, or by working amongst it,—lead produces colic, loss of power in the limbs, especially wrist-drop, and a blue line along the gums.

Laudanum (*opium, paregoric, soothing syrup, syrup of poppies*).—SYMPTOMS.—Giddiness, stupor, gradually increasing into deep sleep, the pupil of the eye very small, lips blue, skin cold, heavy, slow breathing.

Treatment.—Empty the stomach as quickly as possible by vomiting. For an adult give fifteen grains of sulphate of zinc in a little water; to a young person half the quantity, to an infant a teaspoonful of the syrup of ipecac. If you can not get drugs, use mustard and warm water, salt and water, and tickle the top of the throat. After vomiting give plenty of very strong coffee, put a mustard plaster round the calf of each leg, and if cold and sinking give a good quantity of spirit and water. Keep the patient roused till the effect has passed off by beating the soles of the feet, walking him about, or dashing cold water on the face. Remember, if the patient goes to sleep at this stage, it will be the sleep of death.

Lunar Caustic (*nitrate of silver*).—Lunar caustic, or nitrate of silver, has been swallowed by accident when used for touching a sore throat, etc. SYMPTOMS.—Burning pain, similar to arsenic.

Treatment.—Give a large teaspoonful of common salt in a glass of water, and repeat this every ten minutes. Then give a dose of castor-oil, and linseed-tea, or barley-water, for a drink.

Mercury (*calomel, corrosive sublimate, red precipitate, vermilion, etc*).—SYMPTOMS.—Metallic taste in the mouth, burning pain in the throat, stomach, and bowels, vomiting, very painful purging, and cramps.

Treatment.—Give the white of an egg in a little water, repeat this twice more with five minutes between each time, give large quantities of milk or flour and water, then linseed-tea.

Nitre, or Saltpetre.—SYMPTOMS.—Similar to arsenic.

Treatment.—Give plenty of flour and water, then linseed or sweet oil.

Opium (*see Laudanum*).

Phosphorus (*lucifer matches*).—SYMPTOMS.—Great excitement over the whole system; other effects like arsenic.

Treatment.—Give large quantities of warm water with magnesia, chalk, or whiting, or even flour, stirred in it; encourage vomiting, but give no oil or fat of any description.

Poisonous Plants or Seeds.—False mushrooms, or anything of the kind picked up by children, but which you can not tell at the time.

Treatment.—Empty the stomach by any emetic you have at hand: warm water, mustard, salt, or soap, warm chamomile

tea, etc. If there be no purging, give a good dose of castor-oil or olive-oil. If the patient be faint or sinking, give stimulants.

Potash (*soda, ammonia, sal-volatile, salt-cake, disinfecting fluids of concentrated solutions of soda or potash*).—SYMPTOMS.—Heat, pain in stomach, vomiting, and purging.

Treatment.—Vinegar and water, oranges, lemons, sour beer or cider, or sour fruit. Afterwards, olive, linseed, or any wholesome oil.

Prussic Acid (*oil of bitter almonds, laurel-water, cyanide of potassium, used by photographers and others*).—SYMPTOMS.—If the quantity be large, death takes place instantly, but smaller quantities produce giddiness, loss of sight and fainting. The peculiar smell is often perceptible about the mouth.

Treatment.—Give sal-volatile and water, and apply a bottle of smelling-salts to the nose, dash cold water on the face, and give stimulants.

Strychnine (*rat poison, etc., nux vomica*).—SYMPTOMS.—There is lock-jaw, twitching of the muscles, convulsions, the body is bent backward, so as to rest upon the feet and head only.

Treatment.—Try to empty the stomach by an emetic; then give linseed-tea or barley-water, and to an adult thirty drops of laudanum occasionally to relieve the spasms. There are other remedies, but not such as can be used without a doctor being present.

Tartar Emetic (*see Antimony*).

Zinc Oxide.—SYMPTOMS *and Treatment.*—As in copper.

Iron (*Sulphate of iron, or copperas, or green vitriol*).—SYMPTOMS.—Colic pains; constant vomiting and purging; violent pain in the throat, with tension of the Epigastrium; indeed all the symptoms of irritant poisoning.

Treatment.—Magnesia or the alkaline carbonates should be given largely.

Antidote.—Carbonate of soda.

Ivy Poisoning.—Apply soft soap freely to the affected parts; or bathe the poisoned skin frequently with weak tincture of belladonna.

Hartshorn gives almost instant relief from the effects of the poisonous bites of all insects, vermin, and reptiles, by bathing the parts bitten very freely.

Always bear in mind that cases of poisoning admit of no delay. In many diseases and accidents an hour or two may be of no consequence, but here we must think of minutes, and the life or death of the patient will depend on how you employ them.

GENERAL OBSERVATIONS REGARDING THE YOUTH OF BOTH SEXES, AND THE DUTY OF PARENTS AND GUARDIANS.

When Pope gave utterance to the celebrated aphorism, "The proper study of Mankind is Man," he was doubtless fully cognizant of the fact, that the laconism embraces everything appertaining to the sexes as such, as well as to the human family generally. To a mind so astute and analytical as his, it must have been obvious that most if not all of the defects, mental and physical, peculiar to any generation or people, were attributable solely to the imperfect training of its youth, or to the indulgence of such inharmonious and incompatible marriage relations as disfigure the annals of the present day, and as have marked so frequently those of past ages.

As in the vegetable kingdom, the selection of proper seed and soil is indispensable to the production of a perfect plant, so in the animal is the enlightened and judicious blending of sexes a *sine qua non* to the production of a being representing all the excellence of its species. This is an axiom the most unassailable; and hence the vital necessity of accepting it in all its integrity, and of never transgressing it in any respect upon the exalted plane of human existence.

The sentiment of love, in its highest and most divine acceptation, can obtain between the sexes only. Although far from antagonistic to that of friendship or affection, it differs widely from it; inasmuch as it has more important ends to attain, and can never exist between individuals of the same sex. Friendship or affection for one another may characterize the intercourse of men, or of women; but love, in its truest sense, never. This latter is the golden link which unites us at once to our opposites and to heaven, and that culminates in that holy and mysterious compact which results in the propagation of our species, and the accomplishment of our mission in this direction.

While in pursuit of the study of this question, however, we must be careful not to confound or confuse the love under consideration with the mere animal passion that so often

steals its guise to gratify the cravings of lust, and that so constantly betrays the youth of both sexes into excesses that terminate, on one side, at least, in years of misery or shame. And here we would address ourselves more especially to the inexperienced maiden whose guileless heart is too often open to the deceitful blandishments of some cruel suitor who has but one object to attain, or to the sincere and ardent professions of some thoughtless youth, who, without pausing to analyze the motives which actuate him or the stability of his intentions, accomplishes her ruin, and leaves her to learn, alas! too late, that, save before the altar, no woman is justifiable in placing her character and happiness in the keeping of any man. In such instances, deceit and sincerity being alike at fault, the only safe course for the maiden who would escape the Scylla of the one or the Charybdis of the other, is to keep watch and ward on the battlements of her prudence and virtue, and, no matter how impassioned and sincere the pleadings of any individual upon whom she may have bestowed her affections, preserve both intact, as the only means of retaining his love and respect, should he be a true man, and of keeping herself unsullied in the eyes of society and of the world generally.

Although delicate and difficult, the task of whispering some truths into the ears of a young maiden arrived at the years of discretion, yet, so necessary to her well-being and happiness in every possible relation is it that she should be made thoroughly aware of the untoward influences which so constantly obtrude themselves into even the purest atmosphere, we venture, although with some hesitancy, to assume the serious undertaking. And here we may observe, in the first place, that the primary elements of all that makes life worth a single hour's purchase, are to be found in a thorough recognition of what we owe to the Creator, to ourselves, and to society; and the possession of a mind free from the taint which disfigures some of the literature of the day, and from those low desires and loose ideas, which, with scarce a single exception, result from its perusal. Nothing can be more dangerous to the youthful mind than even a passing glance at the works of any of those authors who appeal to the animal passions in a manner so insiduous and ruinous, and who, before a young maiden is aware of it, destroy all her sense of delicacy, and often, alas! betray her into those dreadful excesses which, although kept the profoundest secret from every living soul save herself, invariably end in the total loss of innocent purity and the utter destruction of all physical beauty. We need not be more explicit upon this subject, but may sum-

mon on the witness-stand in proof of what we here state, the sallow and lifeless features, the dim eyes, and desponding gait, which are significant to the astute medical man, and which are to be encountered so frequently in what is termed the very best society. Any violation of the laws of the Creator in this, as in every other connection, is sure to be visited on the aggressor; and when we come to consider that the first offence in the particular relation now alluded to, leads quickly to another, and yet another, until transgressions crowd upon each other thick and fast, and seize upon the whole being, we shall be able to perceive at once how vital the necessity for every young maiden to eschew with prayerful diligence the source of such terrible dangers, and to be in a position to feel within herself, at the period when she may be called upon to give her hand at the altar to some one worthy all the love and affection that could be bestowed upon him, that she enters the marriage state as pure in mind and body as the veriest child, and that in this relation not a cloud or a regret can obscure the sunshine of her after years.

In the observance of the course which is here suggested or implied, lies the corner-stone of all the bliss that attends upon the sacred compact into which two young souls enter for life. And here we would observe, that, in this direction, a serious and solemn duty devolves upon mothers, to instruct at the proper moment, their daughters, as to the dangers that beset them, both mentally and physically, at a certain age. In this relation there should be no false delicacy felt. The truth must be told, and in a manner the most unmistakable. A life of happiness or of misery hangs on the issue, and there should therefore be no mincing of the matter. The crime of self-abuse, if we must say it, is not confined to the sterner sex only. Some of the most fearful examples of it amongst females are to be met with terrible frequency, and of a character so hopeless as to embarrass all medical interference, and to seal the doom of those who had so fallen from their natural birthright and high estate.

How indispensable, then, the proper education of young girls, and how necessary to surround them with a mental and moral atmosphere the most pure and desirable. Let them begin aright, as children, and learn to think well and soberly as they advance in years, and there is nothing to be feared. Let their minds and dispositions be formed on the models of the virtuous fireside rather than upon those of the gaily decorated and frivolous saloon or drawing-room. Let them be taught to

respect their own persons, as a sacred trust from heaven, and to feel that any violation of the laws appertaining to their physical being, in the sense under consideration, cannot fail to be visited with the direst results. This knowledge the judicious mother can impart by degrees, and in her own way. She has at her command various modes and opportunities of approaching the subject successfully, which do not obtain in the case of any other individual whatever. Consequently, she is, to a great extent, accountable for the future happiness or misery of those who lie nearest her heart in this matter; for it must be obvious, that she, above all, can influence their conduct and habits of thought before they arrive at that period of life when they are presumed to think and act for themselves.

It is surprising how often children of unusually tender years are led by bad companionship to familiarize themselves with the abominable practice which we need not again pause to particularize. It is within our own knowledge, that not long since, in this very city of New York, a young girl of great prominence, and most respectably connected, became a hopeless victim of this awful infatuation. And this was the more lamentable, as she promised to be as lovely as the day, and was possessed of a form and figure that were of exceptional beauty. At first her mother was unaware of the cause of her gradual transformation; but when made sensible of the truth, she found, perhaps too late, that to her own criminal neglect the disaster was to be mainly attributed; for, before her unfortunate child was eleven years of age, she had learned to make war upon her mind and body in a manner so effectual that it was pitiable to look upon her when she arrived at the age of thirteen. What has become of her since we are unable to say; but this much we know, it will take a strong hand to rescue her from the most terrible of fates, or to restore her to any degree of health or strength. To the companionship of books and children of questionable morals this whole disaster may in reality be attributed, for the parents of this wretched being were of themselves of morals the most irreproachable, but not wise and watchful in their day and generation.

The necessity, then, of the strictest caution on the part of mothers in the selection of books or playmates for their children becomes obvious at a glance. The child is the marble from which the woman is sculptured: and if the youthful block is disfigured, fractured, or broken, where may we find the moral, mental, or physical chisel that shall obliterate or remove the damning defects?

An eminent physician has justly observed on this head:—

"We now approach a part of our subject which we would gladly omit, did not constant experience admonish us of our duty to speak of it in no uncertain tone. We refer to the disastrous consequences on soul and body to which young girls expose themselves, by exciting and indulging the morbid passions. Years ago, Catherine E. Beecher sounded a note of warning to the mothers of America on this secret vice, which leads their daughters to the grave, the mad-house, or worse yet, the brothel.

"Gladly would we believe that her timely admonition had done away with the necessity for its repetition. But current medical literature, and our own observation, convince us that the habit of self-abuse has increased rather than diminished. Surgeons have recently been forced to devise painful operations to hinder young girls from ruining themselves, and we must confess that, in its worst form, it is absolutely incurable.

"The results of the constant nervous excitement which this habit produces are bodily weakness, loss of memory, low spirits, distressing nervousness, a capricious appetite, dislike of company and of study, and, finally, paralysis, imbecility, or insanity. Let it not be supposed that there are many who suffer thus severely; but, on the other hand, let it be clearly understood that any indulgence whatever in these evil courses is attended with bad effects, especially because they create impure desires and thoughts, which will prepare the girl to be a willing victim to the arts of profligacy. There is no more solemn duty resting on those who have the charge of young females than to protect them against this vice.

"But, it is exclaimed, is it not dangerous to tell them anything about it? Such a course is unnecessary. Teach them that any handling of the parts, any indecent language, any impure thought, is degrading and hurtful. See that the servants, nurses, and companions with whom they associate, are not debased; and recommend scrupulous cleanliness.

"If the habit is discovered, do not scold or whip the child. It is *often* a result of disease, and induced by a disagreeable itching. Sometimes this is connected with a disorder of the womb, and very frequently with worms in the bowels. Let the case be submitted to a judicious, skillful medical adviser, and the girl will yet be saved. But do not shut your eyes, and refuse to see this fact when it exists. Mothers are too often unwilling to entertain for a moment the thought that their daughters are addicted to such a vice, when it is only too plain to the physician."

We have it on high authority that modesty is the chief quality in the adornment of woman; and in no case is it more grateful and becoming than on that of a young maiden who has arrived at that important and interesting period, when she may be wooed and won and made a wife. What the age of puberty is, has been made a careful study by medical men. In the temperate zone, fourteen years and six months is the average period of its first appearance in healthy girls. If it occurs six months earlier or later, then there is probably something wrong. There is sometimes a wider deviation from the age stated here than this, and without any serious meaning; but at no time is such a deviation to be neglected. In a vast majority of cases it is owing to some defect in constitution, health, or formation, and should be seen to and corrected at once, otherwise years of hopeless misery may be the result. "Mothers, teachers," observes the author just quoted, "it is with you this responsibility rests. The thousands of miserable wives who owe their wretchedness to the absence of proper attention at the turning point of their lives, warn you how serious is the responsibility."

The foundation of old age, observes a celebrated author, is laid in childhood, but the health of middle life depends upon puberty. This maxim is invaluable. The two years which change the girl into the woman, frequently seal forever her happiness or misery in this life. They decide whether she is to become a healthy, cheerful wife and mother, or the reverse, —to whom "marriage is a curse, children an affliction, and life a burden." Both sexes mature more early in hot climates than in temperate or cold ones. Within the tropics, marriages are usual at twelve or fourteen years of age. Such precocity, however, is the precursor of early decay; for a short childhood portends a premature old age, and *vice versa*.

It is not a favorable symptom to experience any indication of puberty before the usual average time, as it betokens a weakly and excitable frame. Let us therefore enumerate the principal causes which incline to hasten it unduly. Idleness of body, highly-seasoned food, stimulants, such as beer, wine, liquors, and in some degree, coffee, tea, and irregular habits of sleep. The mental causes are, however, still more potent in tending to premature development. What stimulates the emotions, leads to unnaturally early sexual life. Late hours, children's parties, sensational novels, questionable pictorial illustrations, love stories, the drama, the ball-room, talks of love and marriage, etc., all hasten the event which transforms the girl

into the woman. This becomes obvious when we compare the average of puberty in large cities and country districts, it being clearly ascertained that the females in the former mature from six to eight months sooner than those in the latter; and the result may be seen more plainly in the well-preserved farm-wife of thirty when compared with the languid and faded city-lady of the same age.

During the two short years, then, that transform "the awkward and angular girl of fourteen" into the graceful maiden of "sweet sixteen," the utmost caution is to be observed in every relation, moral and physical. The magic wand of the fairy is at work, and a new creature, as it were, is being released from her chrysalis state, with sentiments and responsibilities that must be kept well in hand. The transformation goes on until at last the system acquires the requisite strength, and furnishes itself with reserved forces, when the monthly periods commence.

A writer of great judgment and experience on this subject, asserts that one of the most frequent causes of disease about the age of puberty is *starvation*. He avers that many a girl is starved to death, from the fact of food of an improper quality being given to her, or from the circumstance of sustenance being administered to her in insufficient quantities, or at improper hours. Hence, from the want of proper nourishment, the system becomes enfeebled and subject to attacks of disease, and especially to those of consumption. The food at such periods should be abundant, varied, and simply prepared. Good fresh milk should be used daily, while tea and coffee should be thrown aside totally. Fat meats and vegetable oils, so generally disliked by girls at this age, are exactly what they require at this juncture of their lives.

All kinds of exercise proper to a young lady, and especially those which lead into the pure open air and sunshine, are also beneficial at this momentous crisis; and a particular kind is to be recommended for those whose chests are narrow, whose shoulders stoop, and who have a hereditary predisposition to consumption. If it is systematically practised along with other means of health, we would guarantee any child, no matter how many relatives have died of this disease, against invasion. It is voluntary inspiration. Nothing is more simple. Let her stand erect, throw the shoulders well back, and the hands behind; then let her slowly inhale pure air to the full capacity of the lungs, and retain it a few seconds *by an increased effort;* then it may be slowly exhaled. After one or two

natural inspirations, let her repeat the act, and so on for ten or fifteen minutes, twice daily. Not only is this simple procedure a safeguard against consumption, but in the opinion of some learned physicians, it can even cure it when it has already commenced.

At first the monthly loss of blood exhausts the system. Therefore, plenty of food, plenty of rest, plenty of sleep, are required. That ancient prejudice in favor of early rising should be discarded now, and the girl should retire early, and if she will, sleep late. Hard study, care, or anxiety, should be spared her. This is not the time for rigid discipline.

Clothing is a matter of importance, and, if we were at all sure of attention, there is much we would say about it. The thought seriously troubles us, that, so long as American women consent to deform themselves, and sacrifice their health to false ideas of beauty, it is almost hopeless to urge their fitness for, and their right to, a higher life than they now enjoy.

With thoroughly healthy girls, what is usually termed the monthly period, continues to recur at regular intervals, from twenty-five to thirty days apart. This is true of something like three out of every four. In others, a long interval, occasionally six months, occurs between the first and second sickness. This latter, *if the general health is perfect*, need excite no apprehension; but under the slightest mental or physical derangement the case must at once receive intelligent treatment. Perfectly healthy young women, have, on the other hand, been known to have been unwell every sixteen days, while others again experienced this change every thirty-five or thirty-six days only. This appears not easy of explanation, and may, perhaps, be attributed to some inherited peculiarity of constitution. In this relation, climate seems to play a prominent part; as travelers tell us, that in Lapland this phase of woman's physical life occurs but three or four times a year.

"At this critical period," observes an able physician, "the seeds of hereditary and constitutional diseases manifest themselves. They draw fresh malignancy from the new activity of the system. The first symptoms of tubercular consumption, of scrofula, of obstinate and disfiguring skin diseases, of hereditary insanity, of congenital epilepsy, of a hundred terrible maladies, which from birth have lurked in the child, biding the opportunity of attack, suddenly spring from their lairs, and hurry her to the grave or madhouse. If we ask why so many fair girls of eighteen or twenty are followed by weeping friends to an early tomb, the answer is, chiefly from diseases which

have their origin at the period of puberty. It is impossible for us to rehearse here all the minute symptoms, each almost trifling in itself, which warn the practised physician of the approach of one of these fearful foes in time to allow him to make a defence. We can do little more than iterate the warning, that, whenever at this momentous epoch any disquieting change appears, be it physical or mental, let not a day be lost in summoning *skilled, competent* medical advice."

From what has been now said it is impossible for any mother of ordinary good understanding to mistake for a moment the shoals and quicksands, both moral and physical, that surround her daughters, whether as mere girls or grown-up maidens. A careful supervision of the company they keep and the books they read—their determined exclusion from the society of either men or women of lax conversation or morals, and the careful inculcation of self-respect, which can alone be based upon proper pride and purity, will go far to obviate the dangers that beset their path, and so ground them, ultimately, in the principles of virtue and a correct demeanor, as to put evil thoughts to flight on their first approach.

While a handsome person and excellent acquirements are always desirable on the part of any individual who pays his addresses to a young maiden, yet there are other and more important considerations which ought to overshadow mere physical beauty or mental attainments; and these are a high sense of honor, and a thorough and practical conception of the duty we owe to God and man. These latter constitute the imperishable part of our nature when properly moulded, and are the staff upon which we can lean with confidence when our mere physical being loses all its brightness, and totters to its fall. Hence the necessity of warning the young and untutored heart against mere outward appearance, and directing it towards a recognition of those attributes and features on the part of the sterner sex, upon which a life of true happiness can alone be founded.

This is a matter of such paramount importance that we feel the necessity of impressing it, to the utmost of our ability, upon those who have arrived at the years of understanding, and whose hearts may yet be free or partially so; and who may be induced to pause ere they commit their happiness for life to the hands of those who may not only be unworthy of a woman's love, but who seek to obtain it under the false pretences of a comely exterior or the adventitious matter of dress, while every fibre of their nature may be selfish beyond measure, and set

only upon the momentary gratification of a passion that when once satisfied turns aside from the hapless and unsuspecting object that has inspired it, and leaves her to mourn in the silence of her lonely chamber, the fate she might have avoided, but that is now beyond repair.

How warm soever her feelings and sentiments, every step taken in the paths of courtship by a marriageable maiden should be well observed and guarded. In her conversation or conduct there should be nothing of thoughtless levity, or anything that could warrant a familiarity on the part of her suitor which might not be taken in the presence of some dear friend or relative. To observe a proper and well-considered course in this relation, is to secure the increasing admiration of the being upon whom she has bestowed her affections, if he be worthy her love. And here we may observe that this is no mere speculation, but a fact as firmly established as any in human experience. For although the tide of passion may run high in an unguarded moment, and set in against heaven and society, yet the terrible and painful ebb follows as surely as effect follows cause, and leaves at least one of the thoughtless culprits stranded forever on the bleak and barren shore of her earthly existence.

There is, therefore, nothing so desirable as firmness and caution on the part of a young maiden in her intercourse with her accepted lover; and both can be observed without wounding his susceptibility, or impressing him with the idea of either prudery or coldness on her part. Her sentiments in this relation can be conveyed through a thousand different channels, and with such force and effect as to impress and influence to the proper extent any individual possessed of correct feelings, or of the mental and moral requisites to make a wife happy.

Let us glance for a moment at the fate of the many beautiful and warm-hearted maidens whose happiness has been wrecked, even in this city, through the fiendish machinations of perfidious suitors. Scarce a house of ill-fame in our midst but has one or more inmates of this character—poor, thoughtless, and confiding creatnres, that would sooner had thought an angel of light capable of deceit than those who had betrayed and ruined them. But they would not be warned, or had not been advised nntil the die was cast; and hence, without a hope, their wretched downward career began apace, until at last, with their ears familiarized to the ribald song and jest, they sought refuge from the upbraidings of conscience in the intoxicating

cup, which so completed and rendered hideous the work of debauch that their persons, once beautiful perhaps to intensity, became a loathsome mass, that provoked both horror and disgust in even the coarsest nature.

And some of those unfortunates had been raised in the lap of luxury, while others had been the idols of respectable and loving households; but the education of both classes had been neglected, as neither had been brought up by strictly moral parents, who had attended upon their footsteps with pious care while they were yet children, and who, as the approached the period of maidenhood, had not excluded every moral taint from the atmosphere they breathed, or taught them true allegiance to the divine laws and those which sustain our great social fabric. Had their guardians inculcated those moral perceptions and principles, without which a woman is the darkest stain on humanity, all would have been well; and perhaps the false suitor, regenerated, or rather transformed, through the persuasive influence of such goodness and piety, might have been induced to turn from the evil of his ways and have led to the altar a happy and beloved bride, the very being who had opened up the approaches to her total ruin by overstepping the boundaries of prudence or those of modesty, without pausing to consider that a step once taken in this latter direction is never recovered.

Although the mental and physical tendencies of mere girls may vary in no small degree, we are of the firm belief, that, under even the most unfavorable circumstances, both may, through judicious and proper treatment, be brought to harmonize with the great objects of creation. In view of the accomplishment of this vast desideratum, then, the early inculcation of proper religious principles, and the example of healthy conversation and moral excellence in the family circle, are of paramount importance. And this is quite compatible with the freedom necessary to the happiness and well-being of even the lightest heart and most joyous disposition. There is not an innocent amusement or pleasure incident to the life of a young girl, that may not be heightened and sanctified, in a measure, through the adroit and loving guidance of a mother of sound observation and an ordinarily well-trained mind. Cruel and unjust as it may be, and is, in many cases, the axiom is a safe one, that the animal passions of men lead them into the blindest excesses, and that in the attempt to gratify them, they too frequently lose all sight of the consequences, and pause only to count the cost when a keen sense of the frailty of their victim

prevents them from making the only possible adequate atonement in relation to one already so fallen in their eyes. This is the true state of the case, and the results already glanced at, are, as we have seen, the most lamentable. Mothers and guardians should therefore bestir themselves, if they would do a noble and abiding work in this connection; and never relax their vigilance until those under their charge have attained the age of maturity and understanding, in the fullest sense. Here the parent plays a most important part, and must, if she would see her daughter a happy wife and mother, train her in all the paths of virtue and correct thought. The surveillance may be gentle and loving, but it must at the same time, be constant and inflexible. Every rock and shoal must be pointed out, and dwelt upon with force and clearness, and the guiding lights of self-respect, purity of speech, and careful demeanor, held constantly aloft and in full view. No other course can possibly succeed, or add, in such cases as now command our attention, to the sum of human happiness. Consequently both mother and daughter should understand each other upon an issue so vital; the younger and more inexperienced looking, with full confidence, for counsel and advice to her truest friend and rightful preceptor, and forming no acquaintance or friendship, with a view to matrimony, without her sanction and approval.

In this relation the quick wit and keen eye of the sober and thoughtful matron will be seldom at fault. She will be able to determine with something like unerring accuracy, and speedily, the character of the suitor who may seek to win the affections of her child, and who must not be judged on mere external appearance, or be taken at his own estimate. Here an honest heart, industrious habits, and a good record, are of the last importance, and more desirable than gold itself. In saying so much on this head, however, it is not to be supposed that mere worldly wealth is to be disregarded, as an element in any compact between two hearts that would become one, and spend together a life of usefulness and independence. On the contrary, we hold it indispensable, that no young maiden of sound judgment permit her affections or the solicitations of her lover to betray her into the cares and responsibilities of matrimony without the possession or prospect of sufficient means to render her home comfortable, and remove her beyond the probability of want. In this, both caution and prudence should be observed; for to step into poverty and its consequent domestic embarassments, is often to step out of love; and then, alas! for the future of both parties.

The vital necessity, then, of worthy male companionship, in the first instance, for any young girl whatever, must be obvious to even the most commonplace intelligence. If those who surround her are pure and good, and the uncompromising enemies of the free-love taint and principles which are now so rife in certain quarters, her selection of a proper companion for life will be the less difficult, as fewer chances present themselves for bestowing her affections unworthily. She can take no more important step between the cradle and the grave than that which leads her to the altar. It should, therefore, be well considered and guarded, as once it is taken the die is cast forever.

Let us then hope that all those most deeply concerned will ponder well the facts we have laid before them on this all-important subject, and let no mother relax for a single moment the vigilance that should wall out from her daughters the dangerous books and companionship to which we have made such distinct reference. In addition, let every young maiden who is approaching the interesting and critical period already named, look well to her footsteps, and beware of allowing her affections to be captured by a pleasing exterior only on the part of one of the opposite sex. However agreeable an attractive face and form, these do not comprise all that is necessary to the most abiding and exalted manhood, and are not unfrequently a delusion and a snare. There is no absolute manliness without manly principles; and no true happiness without moral rectitude and a proper sense of our duty towards heaven. These are the attributes and sentiments that tend to make earth a paradise, and that survive all mere physical excellence, inasmuch as they belong to our immortal part. Let them therefore be sought after assiduously by both mother and daughter in the person of any suitor for the hand of the latter; and let there be no uncertain sound in the premises. Let those desirable features be so prominent in the acts and the demeanor of the man as to be obvious at a glance, and let them not be simulated on certain occasions. True virtue and uprightness of thought and conduct soon manifest themselves in those possessed of such inestimable treasures; and whenever or wherever we see their absence verified either by word or act, we may rest assured that the transgressor is unworthy the love of any woman who values her own happiness, or who hopes to make the marriage state, under heaven, all that it ought to be, both morally and physically.

For the Especial Perusal of Youths of Understanding, as well as for that of Fathers and Guardians.

If man is "the noblest work of God," most assuredly every word, thought, and act of his, ought to tend towards the elevation of his mental and physical being; because this implied perfection is to be regarded in a measure as the result of his acquiescence in all the laws, moral and otherwise, appertaining to his nature. That is, if he would assume and maintain the high position accorded to him, he must not violate any of those divine precepts or rules laid down for his guidance; but from the first moment of his responsibility to the last of his earthly existence, walk in the way of godliness, virtue, and truth, and never transgress any of the provisions relative to the true development and important mission of his animal structure.

The license accorded to boys when compared with that allowed to girls of the same age, ought to engender in them a chivalrous respect for the gentler sex, and never urge them into anything savoring of egotism or tyranny. The apparent superiority is but simply the result of greater physical strength, and the freedom with which the one sex is permitted to move through the world compared with that accorded to the other. There is in reality no mental superiority in the one over the other; for in this respect it has been shown that the impress of man has been left mentally on the age more than that of woman, because, from some ill-judged laws or rules of society, she has been subject to restrictions which circumscribe to an unwarrantable extent her sphere of action.

But while laying it down as an axiom that there is perfect mental equality between the sexes, we cannot refuse to entertain the idea that woman is the weaker vessel physically, and that her dependence upon man, and her claims to his love and protection, arise to some extent from this cause, although the sublime mystery of her being appeals to him in a higher and more abiding sense. This taken for granted, then, and perceiving, as even the most unphilosophical can, that both sexes were designed to harmonize with each other in every possible relation, and that the weaker and more beautiful is obviously entitled to greater consideration than the more robust, it behooves the latter to look well to their manhood and the perfection of their mental and physical status, for a defect in either is not only destructive of anything like love in the female bosom, but of a character which, with but few exceptions, builds up an insurmountable barrier between the man and the woman towards whom he may be attracted.

We say mental and physical status here, because the body is seldom injured through excesses of any description, without the mind suffering commensurately. And as the foundations of a healthy physical existence are laid in childhood, we would observe that this fact, in relation to boys, as we are now treating on them more especially, should be recognized to the fullest extent by fathers and guardians, as upon their judgment, affection, and fidelity, the character of the rising male generation must mainly depend.

Although, as already observed, a greater latitude is allowed to boys than to girls, in almost every relation, yet this latitude must be circumscribed and confined to certain well-defined, healthy bounds. And here we would again dwell upon the vital necessity of good companionship and good books, where example and precept harmonize with the exalted ends to be attained in after years. Of course, the family circle is to be regarded as the true starting point, whence the earliest lessons in vice or virtue are derived, and should this prove to be lax in any of its teachings, moral or religious, the very germs of success are embarrassed or destroyed at once.

It is astonishing how quickly young lads, not much more than half way to their teens, acquire bad habits and principles from impure associates, or the unguarded conversations which sometimes occur at their own fireside. From both these sources the worst consequences are to be apprehended, as they gradually undermine every principle of good, and so familiarize the tender ear and understanding with what is most pernicious, because of the almost indelible and fatal impress that is left upon the unreasoning susceptibilities. Whatever may be said to the contrary, there are unmistakable traces of the early hearthstone to be found in the lives of most men; and such being the case, how indispensable it is that the atmosphere that surrounds it should be free from taint, and that the greatest caution should be observed that nothing transpires within its sacred limits that might have the slightest tendency to mar the man in the child, or thwart the beneficent designs of nature regarding him.

In view, then, of the influences of the family circle, and that of the father upon the son, while yet a mere youth or child, that circle should be made as attractive as possible, and on a plane thoroughly comprehensible to the intelligence to which it appeals. If parents would shape their children to the noblest ends, they must gain their confidence and affection by becoming children themselves in a measure. They can not

preach or teach to any purpose from a reserved or exalted pedestal, or through the instrumentality of the sober long-faced truths which are applicable to grave years only. The atmosphere of youth is, in the natural order of things, bright and happy; and if we would influence, by precept or example, those still surrounded by it, we must assume to breathe it ourselves for the time being, and sow our earliest good seeds in its tender light. Once the kind and judicious father has won the heart and confidence of his little son, the road to the fullest success lies wide open; and feet that under other circumstances would assuredly have turned aside under less benign influence from the paths of rectitude and truth, are now easily directed into that glorious upward and onward course which never fails to culminate in happiness here and hereafter.

Some of the most terrible evils that beset the path of so many of the young of the sterner sex, result from association with children of their age who have learned to debauch their own persons, and to indulge in those secret habits which have been long noted as fraught with disaster and death. So early the period at which unsuspecting little ones are led into this terrible snare by their seniors of two or three years, that few will be inclined to believe that this first essay in crime has been attempted at the age of eight, and continued until an actual drain on the young energies and vital forces of the system commenced. It is, therefore, obvious that the lynx-eye of the father or guardian, or of both parents, should at this tender period of youth be brought constantly to bear upon all the acts and tendencies of their young ward or progeny, and that they should seek to inculcate those pure ideas and aspirations which are the only security against this danger. Let the playmates, the toys, and the rudimentary books of the child be carefully selected, and let there be for him an abiding attraction about his own door and fireside, so that he may not be necessitated to look abroad for any of those innocent pastimes or recreations that have such charms for the young. The great error of many parents, in this direction, lies in the dry and solemn homilies which they conceive ought to be forever mumbled into the ears of their children, or the long religious services to which they regard their subjection as wise and indispensable. This is a fatal mistake. The medium through which the young are to be taught successively their dependence upon heaven and their duty towards God and man, should rather consist of the green fields, fruits, and flowers,—of sunlit skies, running brooks, and balmy winds,—the song of birds, the changing seasons, and the

summer woods. These and the beneficent design of the Creator in calling them into existence for the benefit of man in a pre-eminent degree, should form the earliest pages presented for the study of the child; and if each of the beauties and truths they contain be carefully explained upon the basis of that higher information which may be sought through the "revealed word" as the young student advances in years, the result will be the most happy, and culminate in all the perfection possible of attainment in this earthly sphere.

But while inculcating these salutary lessons, there must be no false delicacy on the part of the father, relative to pointing out, in the clearest possible manner, the dangers with which his inexperienced and susceptible child is assuredly surrounded. The parent is but ill versed in his duty, or the prevalence of the crime of self-abuse in the young, who fancies that by keeping his youthful off-spring in ignorance, so far as he knows, of the character and manner of this frightful offence, that the child must necessarily escape its taint. Let there be no misconception on this head; for it may be accepted as a leading fact, that nineteen boys out of every twenty learn something of it at a very tender age; and from sources, too, but badly qualified to warn them of its terrible results. And be it further remembered, that no matter how innocent and unconscious of guilt the first attempt at its commission on the part of a poor unsuspecting young creature, there is something almost fatal in tampering with even the undeveloped organs of generation, or in endeavoring to excite them to undue or premature action. This fact must be dwelt upon in the plainest possible manner, and so impressed upon the youthful mind as to satisfy it that a single move made in this direction tends to speedy destruction and death to both body and soul. So soon, then, as the child is capable, in any degree, of comprehending advice and instruction, this subject must be broached in the best and most impressive manner known to the judicious father who would acquit himself fully in the sight of God and man; for to leave the matter to mere chance, in the hope that escape was possible through a fortuitous combination of circumstances, would be to be guilty of a crime the most heinous, and scarcely second to that of murder.

To the youth of understanding, however, we may address ourselves more directly; assuming that he may not be altogether free from the taint of this sin. In the first place, then, let us lay it down as an inexorable fact, that so terrific and contaminating is this practice in any degree, that it not only tends

to destroy every particle of physical beauty and manhood, but, if persisted in, results in absolute idiocy, or a premature and most horrible death. This is no over-drawn picture, but may be taken as an absolute fact, in connection with the quite as inexorable truth, that the youth addicted to this prevailing vice is as certain to render himself incapable of propagating his species or consummating the holy sacrament of matrimony, as that the sun is in the heavens at midday. In the unnatural excitement which saps his whole being, he may fancy, at the time of self-abuse, that this is not so; but should the crisis ever arrive when a loving and confiding wife is betrayed into his arms, then comes that terrible humiliation which is worse than death. There is no escape from the consequences of this monstrous offence should it be indulged in to a certain point; for then it seizes upon the whole being, and like the infatuation of the arsenic eaters, whether continued or abandoned, ends alike in the most appalling mental and physical suicide.

What youth, then, of the slightest manly feeling, or intelligence, would so make war upon his physical being, as to render him disgusting to the pure and good of the opposite sex, and even to those who had fallen from virtue, and taken refuge in the lowest brothel? Can it be possible that any individual who sets the slightest store by the love of a beautiful woman, or the possession of every manly attribute and sentiment, will, after the perusal of these startling and inexorable facts, approach the edge of this shuddering abyss, or, if partially engulfed in it, will not struggle to extricate himself at once. There may yet be time to retrace his steps, and escape the awful depths that yawn beneath him; while the commission of a single offence more may hurl him irrevocably to his dreadful doom. Oh! could we but depict in adequate language the fearful and hideous wrecks that have resulted from this crying sin against nature, each particular hair of the youthful aggressor would stand on end, like the quills on "the fretful porcupine." But so thickly strewn around us, under a thousand loathsome forms, are the evidence of this most damning crime, that those who run may read, if they only will.

And now that we have dwelt at some length on this part of our topic, let us turn for a moment to those youths who have sufficient virtue, manliness, and strength, to eschew this great evil, and say to them, that although they have escaped it, their path is still beset with other snares which lead to discomfort and misery in a lesser degree only. If not prostrated at this disgusting shrine, we have known the manhood of many to fall

a victim to unholy and misguided passion, and who, by giving full rein to their unbridled lust, or falling into the snare of some casual circumstance, have brought woe to true and unsuspecting hearts that loved "not wisely but too well." And here we would observe, that when a respect and highest consideration for the opposite sex is not entertained by a man, whatever his condition, he is unworthy the recognition of society or the favor of heaven. There is something of infinite treachery and cowardice on the part of a suitor, sincere or pretended, who steals into the affections of a young maiden, with a view of betraying her, or who having once gained them on an honorable basis, takes, in an unguarded moment, advantage of the love she bears him, to humiliate her in her own eyes, if not to accomplish her ruin beyond redemption. No true and chivalrous man or youth who respects the person or the memory of the mother who bore ,him, has ever been guilty of doing such dastardly violence to the sex, or of treading ruthlessly beneath his feet what God has made so confiding and beautiful, and what is in every relation the counterpart of his own sister. There is something here which demands attention, and which should be subjected to the strictest analysis and scrutiny. To the professional profligate, who knows no law, human or divine, we do not address ourselves. We leave him in the hands of the Living God, who is sure to call him to account when he least expects it. To such, however, as are not vitiated in this relation, and whose inexperience is beset with warm passions and susceptibilities, we would give a few words of caution and advice; hoping to enlist their sympathies and attention regarding a matter which effects so vitally their interest and happiness, not only in this world but in the world to come.

To be succinct, then, when a youth finds himself approaching the threshold of manhood, or that period of life which succeeds his mere boyish days, he, in most cases, enters upon a new and charming phase of his existence, which is expressed mainly in a desire for female society, and generally for that of one being beyond all others, who in his admiring eyes appears to be the best and most beautiful of her sex. Now this is nothing more or less than the first dawning of love, and before we would have its partial victim commit himself irrevocably to the overpowering passion in any individual case, we would implore him to pause on the verge of the charmed circle, and ere he become hopelessly entangled in its delicious mazes, seek advice from his natural guardians, and analyze for himself all the circumstances surrounding the being who has awakened such strange

sensations in his bosom, and the possible result of attempting to unite his destiny to hers forever.

To this end, he must endeavor to look upon things as they really exist, and not permit his enthusiasm or admiration to present them in any romantic or fanciful light. As a primary step in this direction, he must measure his own pecuniary circumstances and prospects, and see how far justified he might be in endeavoring to win the affections of any young maiden with a view to making her his wife. We are, of course, aware that but few inexperienced youths pause thus practically upon the threshold of new hopes and aspirations; but then this does not nullify the wisdom and necessity of doing so. No honorable or prudent person will commit himself to a step so serious as that of marriage, without seeing, to some extent, the road before him; nor will he tamper with the love or affections of any woman whatever, whom he considers unworthy to become his partner for life. In the fullest manliness on this point there is a chivalry the most noble and exalted. Everything like deceit must be discarded totally, and if it is found that the over-sanguine fair one has misinterpreted any word or act of kindness on the part of him who may regard her as a friend only, she must be undeceived, and at once. The safest rule to follow in this relation is for the young man to be cautious, and never inspire any hopes or confidences in any of the opposite sex, that he does not wish to exist. There are a thousand channels through which the pleasantest intercouse may flow securely, without entering upon this vital one; and these are familiar to every person of ordinary good understanding. Where there is no intention of awaking in the female bosom a sentiment of love, there should be neither act nor word calculated to provoke it; and if, as is often the case, one of the softer sex, overstepping the bounds of prudence, if not of modesty, makes advances on her part, then the only honorable and correct course of the object of her affections, is to withdraw himself totally from her society.

After becoming satisfied that he is in a position to support a wife, and being free in person from such physical blemishes as have been already alluded to, the first care of the expectant bachelor should be to select from among his acquaintances a maiden of comely looks, industrious habits, and sound and pure morals. These are essentials the most important, and must underlie all the accomplishments which render a woman fascinating, if she is ever to become the light of her own household. There can, of course, be no ob-

jection to the possession of those ornamental acquirements which render a drawing-room so attractive at times, such as music, bright conversational powers, and all the agreeable phases of a polite education; but these, desirable as they undoubtedly are, must not be accepted as the true constituents of happiness; but rather as the agreeable guise that the more serious and abiding attributes assume, until the moment for their more active agency presents itself again. No man of moderate means has ever dined off a piano solo, or supped off a dish of fashionable gossip; and hence the necessity of looking for something more substantial in the person to whom he might be induced to pay his addresses, with a view to matrimony, and of eschewing every female, no matter what her attractions, who has not within herself the knowledge and elements that constitute a good housewife. The freaks of fortune are often both sad and surprising; and hence it is of vital importance that parents educate their children in some trade or calling that might stand their friend in the hour of adversity, when they might find themselves deprived of the last shilling. And here we may refer, briefly, to the helpless condition of some of the fashionable youths who are depending solely upon circumstances for a life of ease and pleasure to which they devote themselves, and who, through a single turn of the wheel of fortune, might be reduced to beggary, from the fact of their having no positive means at the ends of their own fingers of earning their daily bread. On this point we would urge the knowledge of some useful employment on the part of the young of both sexes, no matter what wealth may surround them for the time being; because by its acquisition they are, in a measure, secured against fate, and have an inner and more satisfactory sense of independence than flows from the possession of mere perishable riches.

But, now presuming that our young suitor is fairly on the carpet, and that, with the sanction of his parents or guardian, which is indispensable, he has determined to win, if possible, the heart of some fair one supposed to be possessed of all the attributes, and the germs of all the qualifications, adverted to, it must be apparent that his hour of danger and difficulty has arrived, and that in dealing with it, the greatest caution and prudence ought to be observed. With a view to the fullest success, then, and in furtherance of the great object upon the holiest and highest basis, the moment he perceives a being worthy all his love and affection, she must at once become sacred in his eyes and never be the subject of any familiarity

that might shock her ears or her sense of propriety in any degree, or that might tend to lower her in her own estimation. The more chaste and considerate his intercourse with her, to even the most trifling word or whisper, the higher her sense of his nobility, and, consequently, the warmer and the more profound her sentiments of love towards him. It is a mistaken idea that an occasional questionable jest or brilliant *double-entendre* has any charm for the ear of a young maiden of correct perceptions; for although the circumstances of her position may often extort a smile from her as a foil for her pain and discomfiture, the shadow of the cruel though unintentional offence does not easily pass away from her, inasmuch as it is calculated to awaken in her chaste bosom doubts as to the morality and purity of the being whom she may love dearly. Let there be then, on the part of the suitor, a noble consideration for the woman who has given her whole heart to him; and let him feel that the bonds which she is willing to assume, can be only made holy and happy when forged in a sense of true delicacy and the highest moral obligations. One impure, indelicate, or low word uttered in the ear of a truly chaste and virtuous woman may be destructive of her true happiness for all time to come; while a single trifling act savoring of the libertine could not fail to estrange her from the transgressor forever, if faithful to her pride or sex, or else so humiliate her in her own eyes, as to cause her to feel that the love she brings to the altar is not so worthy, so fresh, or so sanctified, as it would have been had it not been soiled and dishonored, in a measure, by him who should have guarded it more jealously.

The demeanor, then, to be observed by a young man, in relation to the maiden of his choice, must, while open, generous, and warm, be carefully studied, elevated. and free from the slightest taint of immorality. The step which he premeditates is the most serious that could possibly be undertaken by him, and as it involves a partnership for life with a being whom he is to pledge himself before God and man to love and cherish until death, it behooves him to make the compact one of the most chaste and sacred, so that it may never pall upon his sensibilities, but always, under heaven, bear the impress of unfading youth.

And now that we have been so explicit on this point, we must go farther, and warn the ardent and well-meaning suitor of another precipice that besets his path from the period of his declaration to his appearance before the altar, and that is, the great danger that attends the warm embraces which a lover

sometimes bestows upon his affianced, when alone, without presuming for an instant that his passions may outstrip his reason, and, in a moment of intense excitement, hurry him into an excess that would destroy the purity and self-respect of the being who confided so implicitly in his honor, until she stood before him a guilty and injured woman. This is a matter for most serious consideration; for notwithstanding that the aggressor makes every reparation in his power and still redeem his plighted vows, the memory of this great indiscretion or crime, is likely to over-shadow all his subsequent married life. Let it then be distinctly understood, that even the ordinary embrace so frequent between two young lovers before they become united in marriage, must be indulged in with caution and reserve, where no eye but that of heaven is upon them. The passions, like tinder, often take fire from the slightest spark, and it therefore becomes a matter of the last importance, that until a man and a woman become one according to the laws of society as well as those of the Creator, the stronger vessel must keep his desires in hand with a bit and bridle the most inflexible and stern; otherwise all the charm and brightness which properly belong to the marriage state can not fail to be tarnished or perhaps ultimately extinguished in gloom.

When entering upon the phase of his life which tends toward matrimony, the young and ardent suitor, once that his heart is truly engaged, should treat the object of his affections with such loving respect and consideration, as could not fail to ennoble him in her eyes, and secure her heart upon a true and abiding basis. Every maiden of modesty and womanly instincts is thoroughly conversant with what is due to her, and alive to every circumstance, however trifling, bearing upon the character of her intended. The more profound her love the keener her discrimination, and the more jealous her eye and ear. Not a single expression or act appertaining to his intercourse with her or others but is weighed unconsciously, and subjected to that subtle process of analysis which is almost instantaneous in its results. It is therefore ungenerous, and as dangerous as it is unjust and reprehensible, to wound her susceptibilities in any relation; for notwithstanding that she may permit, without actual censure, or apparent chagrin, any slight dereliction of duty to pass in this relation, she cannot fail to feel its unworthiness, and the shock to her esteem and affections which it must necessarily entail.

But if we have dwelt upon what may be termed the two leading evils which beset the path of youth, there are yet others,

scarcely less dangerous, which require the most careful consideration; and one of these is the sin of intemperance. We need not travel out of every-day common record for evidence to establish the dread consequences of this dire infatuation and its general prevalence. Like most other criminal practices, it steals through the first stages of its progress by slow and imperceptible degrees; but at each unconscious step, so securely does it entangle its victim in its meshes, that not unfrequently he passes beyond the final point of redemption before he is thoroughly alive to his lost and hopeless state. And here, again, the influence and habits of the home circle become of the first importance. If unswerving temperance be the inexorable rule of the household—if the seductive cup, in even the most harmless aspect, be banished from it with firmness and persistency, there is every hope that the dangerous out-door influences which so throng the path of the inexperienced, may be met and neutralized.

But if the household be tainted, to any extent, with the vice —if indulgent fathers and mothers will tempt their children with an occasional sweet spoonful of the poison, they do neither more nor less than set fire to one end of a slow fuse which is almost sure to result, one day or other, in the most fearful destruction.

But as we are speaking, as it were, to a youth of understanding, we must appeal to his own manhood and sense of right. And here we would observe, that next to the appalling crime of self-abuse, that of habitual intemperance is most destructive of pure love, and of the physical capacity or power to realize from the chaste passion all that heaven designed it should accord. No woman of correct feeling or judgment has ever bestowed her heart upon an habitual toper, or enjoyed his society for a moment, not to speak of his maudlin embrace. This is true beyond question, and to an extent so dreadful, that no inconsiderable portion of the infidelity which a neglected and disgusted wife visits upon her husband to-day, may be traced simply to the vice of habitual drunkenness, on his part. No matter how warm the affections of the maiden, or how sincere the love of the wife, this curse tramples out both alike; and hence the necessity of the utmost vigilence on the part of any youth who would win and retain the heart of a pure and beautiful maiden, or preserve his health and manhood intact until both, at a ripe old age, declined in the natural order of things. It may be laid down as an axiom, then, that no true love can exist between a good and pure woman and the man who ren-

ders his person disgusting to her, and who in a measure emasculates himself through the constant use of intoxicating liquors; and when we come to dwell on the fact, that the prostration of his high mission and manhood arises from the indulgence of a loathsome vice, whose inception is to be traced to the first fatal and seductive glass that is thoughtlessly raised to his lips, surely the individual who is yet free from the taint of this curse, or the man who is its partial victim only, should, if these few lines happen to meet his eye, never approach—or dash from him forever—the cup that has been so fraught with some of the direst crimes, heart-aches, and miseries, known to the human family. When, therefore, it is a fact beyond contradiction, that a persistent use of stimulants of any description tends to generate morbid and adventitious sexual desires, that are succeeded by a reaction the most depressing, inconvenient, and dangerous, and that frequently result in permanent injury, what shall we say in denunciation of the habitual use of those fiery potations that not only lead to rags and beggary, but corrupt the blood, disfigure the features, and trail the last particle of manhood in the dust?

To all within reach of our warning voice, we would, then, say, beware of the first glass, and those inebriates or thoughtless persons who would tempt you to pollute your lips with it. There is danger in even looking upon it or in breathing the atmosphere inhaled by those who have passed its fearful Rubicon, without either the wish or power to retrace their steps. Avoid such, and their social meetings or orgies, with all the strength and decision of which you are capable; for in this relation also, "wide is the gate and broad is the way that leadeth to destruction."

The vice of intemperance in youth is not unfrequently associated with that of gambling, and is almost invariably wedded to that of promiscuous sexual intercourse; and here we find another dangerous pitfall besetting the paths of the young on their way toward matrimony, and the attainment of the fullest and most perfect manhood. Fatal even as the crime of gambling, *per se*, may be, it is less terrible in its effects than the physical and moral destruction which results from the loathsome and contaminating embraces of the lost and lewd woman who sells her person to every passer by, and so poisons the life blood of her unsuspecting young victims as to entail upon them a life of disease and misery horrible to contemplate. A man may lose his money at the gaming-table, and suffer the pangs of remorse and the beggary that it involves, but criminal as the

passion for play is, and frightful as have been the domestic disasters that have resulted and do still result from it, yet if he have escaped the vice of drink and the taint of impure and loathsome women—if his physical structure and mind are not wholly poisoned and debauched—there is hope for him, as a woman's love can survive the one, although it dies out into absolute hatred and disgust under the other.

There is little more to be said on this part of the subject. We have touched all its vital points, and trust that the seeds we have endeavored to plant, in all honesty and good-will, may be found to bear the sweet and abiding fruit they are so pre-eminently calculated to yield. In summing up the whole case, then, we would say to fathers and guardians, form the thoughts and habits of your wards or children by a joyous and virtuous fireside. Let their earliest perceptions of right and wrong be based on no uncertain foundation. Set them examples of morality, and inculcate that religion in them which is filled with innocent sunshine, and which alone is calculated to inspire their tender hearts with sentiments of true love towards their Creator and their fellow men. Warn them, in the plainest possible manner, of the danger of bad company, loose habits, and any and all of the evils and infamous practices that lie in wait for them, and when they grow up to be men, they will bless and appreciate the kindly care bestowed upon them, and be not only a credit to themselves, but to the human family at large.

Man and Wife.—A Plain Exposition of their Duties, Moral, Mental and Physical.

We now meet, as it were, two pure beings at the altar, who have profited by the advice and example of judicious parents or guardians, of sound morals and social views; but notwithstanding that the crowning happiness of the two lovers has been achieved in their becoming man and wife, there is yet much to be considered and accomplished on the part of both before their feet are established upon a rock.

In the first moments of his matrimonial existence, then, the newly fledged husband must not suppose for a single instant the ears or the eyes of his wife are less chaste and pure than they were before she had become his in the sight of God and man. Here is a point of vital importance, and one upon which such grave issues hang, that we place it in the very first rank of our present observations. Save in one instance alone, the

conduct and consideration evinced towards the maiden must be mainly observed towards the wife; for through this manifestation of respect and delicacy, the freshness and novelty of courtship may be continued for an indefinite period. Let the wife be preserved by the husband a beautiful mystery in part, —let the natural veil of modesty which shrouds every pure woman be never ruthlessly torn apart, or her sense of propriety be blunted by course or indelicate remarks, and the charm of her being will never pall upon the senses, but, on the contrary be, as Shelley has it, "A joy forever."

It is too frequently the case that a young husband fancies the nuptial ceremony gives him the fullest power over the person of his wife, and that consequently the precise character of the intercourse between them, now that they are married, is not a matter of much moment; but a more grievous misapprehension could scarcely obtain in any relation, for a wife's sensibilities and person can be so abused as to be debauched in a measure, and so lessen her regard for the secrets of wedlock that they lose all their charms in her eyes, while the aggressor in the case suffers in the same direction, and precisely to a similar extent.

This is a fact substantiated by the experience of tens of thousands; and, as the destruction of the fine fibre of which these sacred relations are formed, obviously leads to much indifference in both parties, we can at once perceive of what importance it is to keep it intact, and how necessary to the happiness of wedded life to preserve to the latest hour of its existence something at least of the sweet freshness that hung about its dawn.

As we have already descanted somewhat diffusely upon the rule of conduct to be observed on the part of the youth as well as on that of the maiden who intended to become one at the altar, so now that we presume them to be man and wife, we would be equally explicit as to how they should comport themselves as such. In addition, then, to what we have already just said, we would observe that in the first moments of wedded life the constant and unreasoning abuse of the privileges of a husband cannot but result in evil consequences to both parties, inasmuch as it tends to render commonplace that which is intended by an all-wise Creator to be otherwise, and is the brightest and holiest link that unites the sexes. This privilege once familiarized through constant and inordinate indulgence, loses all its charms, while the abuse which robs it of them, not only tends to injure the young wife physically, but the husband also.

In this vital and mysterious intercourse, there must be no false excitement or attempt to forestall nature. In this relation, the tide must flow and ebb according to the promptings of a law that none can fail to comprehend, and whose operations must not be accelerated if they are to be an unfailing source of delight, and to influence us through long years with undiminished powers. The reaction which invariably attends any continuous excesses of this character is so painful, humiliating, and dangerous, as not unfrequently to lead to the most serious misunderstandings between the parties most concerned and destroy the sweet confidence which should obtain between them. Again, the evil consequences of such excesses to the infant yet unborn are at times frightful to contemplate. A weakly and diseased frame, and, frequently, mind, are the dreadful results, while the health of the mother sometimes suffers commensurately. The young husband also pays his share of the penalty; as the natural excitement which is the true key to all the pleasures that attend the sexual relations when indulged in upon the true basis, dies out under the enervating influences of satiety until the bond between man and wife becomes so relaxed in this relation as to be almost worthless. And let it be clearly comprehended here, that as this bond becomes weakened or vitiated between the young persons, so wanes their love and esteem for each other, until in time they come to look upon their union with apathy if not disfavor, and then are opened up all the approaches to misery the most abject and heartrending. Let there be, therefore, caution and moderation used in this all-important relation on the part of the husband, as he alone is apt to be the transgressor,—for we can not suppose a case, except in the rarest instance, when the wife is at fault on this head.

As a large majority of mankind have to earn their daily bread in some way or other, we shall be safe in appealing on the subject of prudence and economy to almost any newly-married couple; and, in doing so, we would remark, in the first place, that poverty does not, as a general thing, tend to perpetuate that feeling of love or affection between man and wife that had influenced the days of their courtship, and, that, consequently, a primary object with the husband should be the maintenance of his wife upon a comfortable and abiding basis, and the total rejection of any habits that through their expensiveness might interfere with his success in this direction. The man is totally wanting in affection and chivalry, who fails to provide properly for his wife when it is in his power to do so, or when

by curtailing some of his wasteful personal expenses he might add to her comfort and independence. Not unfrequently the amount which has drifted into the restaurant, the cigar-shop, and the drinking-saloon, out of the pocket of the young man who has just crossed the threshold of matrimony, if properly expended, might have obviated a life of misery, and laid the foundation of a cheerful and happy fireside for the rest of his days. For it is well known, that these haunts not only tend to engender neglect on the part of the husband toward a wife, but often so embarrass those of anything approaching limited means, that frequent intercourse with them leads, almost without an exception, to domestic infelicities. While we write, we have in our mind's eye a number of thoughtless and unhappy beings, whose thraldom in this relation has destroyed their once cheerful households, and whose neglect had so estranged and disgusted their once true and affectionate wives, that they drifted into infidelity, and became lost to virtue and society forever. The saying, "a constant dropping will wear a stone," is a trite and philosophic one; and the man, young or old, who presumes so far upon the truth and affection of his wife as to fancy that neither could possibly give way under his constant indifference or vulgar and intemperate habits, knows but little of the human heart, or how easily that of some women is crushed out of shape.

Nor is the newly-married wife secure from danger, on her part, in this relation; for sometimes she also, now that she considers herself finally disposed of, falls into the practice of indulging in some sweet little spirituous potation, which grows upon her until she at last falls a victim to the intoxicating glass. To the maiden who has just left the altar with the man of her choice, we would then say, "touch not, taste not, the unclean thing." There is danger lurking within the intoxicating cup, however disguised it may be, and when once its subtle poison taints the sweet breath or mars the mellifluous tongue of one of the gentler sex, her doom is almost irrevocably sealed! Let, therefore, neither the usages of polite society, nor the seductions of any of her own cherished circle of friends induce her to tamper, even in the most remote degree, with the insidious poison of the bowl; for so subtle and destructive is it, that its first contact with certain natures has been known to lead to headlong ruin, and so swiftly as to appal even the stoutest heart.

In truth, the greatest caution must be observed on both sides of the house in this connection, as well as in that of in-

dustry, economy, and prudence. And if the most fitting place for the husband, after the labors of the day are over, is his own fireside, with his young wife by his side, she, "the partner of his joys and woes," must endeavor to surround his home with every possible attraction; and light it up with a cheerful face and all the nameless charms that make it "the only spot on earth" to him. To this end, she must be always neat in her person, if at all within the range of possibility, for there is nothing more pleasurable to a husband than a sense of the purity of the personal habits of his wife, and the comeliness of her attire when she presents herself before him. This latter involves neither labor nor very extraordinary expense. The bath, and, if needs be, the simplest fabrics, shaped if necessary, beneath her own supple fingers, will meet all the necessities of the case. These are attractions of such virtue and potency that they always operate like a magnet, and not unfrequently draw a husband away from the evil influences that tempt him to regard his home as a place of temporary sojourn only. We have paid some attention to the subject, and can vouch for the fact, that, in ninety-nine cases out of a hundred, a pure, industrious and cheerful wife, who meets her husband with a bright and warm smile on the threshold of her dwelling, spends the majority of her evenings in his society, without a fear of the future.

We are, of course, aware that there are some men so lost to everything that dignifies humanity or renders the marriage state all that it ought to be, that no ties can bind them; but we make no reference to them, and allude only to those of sound understanding and ordinarily good morals. Yet even here we admit that the rule is not infallible, as some husbands are so weak and easily led as to soon fall away from their first love, and lose themselves in less sanctified relations. However, the most advisable course for a young wife to pursue, under any circumstance, is to make her house and her person as attractive as possible, and to supplement the cheerful blaze of her fireside with the light of her own winning smiles and ways, and the thousand nameless little enchantments which, taken together, often weave the silken meshes which retain with a strength not to be overcome, the willing captive who, under less favorable and grateful circumstances, might have launched out into some course of conduct fraught with destruction not only to himself but the being he was pledged to cherish and protect to the last hour of his life.

But there are other observances, also, which ought to be

regarded with the most profound caution by the newly married who desire to spend their days in comfort and happiness together; and one is the manner of their intercourse with such of the opposite sex as either the husband or wife may come into friendly contact with. Every properly constituted man or woman is more or less of a jealous disposition; for without this sentiment, active or latent to some extent, there can be no true love. Censure it as you may—call it mean and petty, if you will—but the fact obtains, nevertheless. Who that is conversant with the press in any degree, but can bear evidence to the fact that scarcely a newspaper is published without some painful recital, bearing upon this point, meeting the eye. To avoid the devastating influences, or approach of the "green-eyed monster," should be a leading feature of the wife's prudence, as well as of that of the husband; for so unreasoning and sensitive are our natures in this direction, that when they are once aroused to suspicion, they seldom or never recover their wonted tone of confidence. And yet the accused party may be virtually innocent of the crime laid to his or her charge, although there are generally some grounds for censure on the score of thoughtlessness or that lightness or trifling which is so liable to be misinterpreted by certain individuals. Above all things, then, and especially on the part of the wife, no matter what the purity of her soul or intentions, she is always to be circumspect with regard to her conduct or intercourse, in company or otherwise, with any of the opposite sex. Caution and decorum in this connection is of the first importance; for not only might any thoughtless familiarity, or any laxness of self-respect on this head be wholly misinterpreted by her husband, but, how innocent soever, be likely to fare no better at the hands of the individual towards whom she might have comported herself with unconscious levity. There is, therefore, nothing for it but the strictest prudence and an unswerving adherence to such a line of conduct as might be pursued with safety in the presence of her husband towards any gentleman of her acquaintance. Nor must there be any innocent secret confidences with any male friend, no matter how laudable the object, outside the sanction and recognition of her rightful counselor and protector. The truer and prouder the husband, the more sensitive and the more jealous of his honor, and of his claims upon all the consideration to which he regards himself entitled on the part of the woman of his love—the wife of his bosom.

Lamentable as it is, the fact is notorious that even one furtive glance—one thoughtless expression—one little whisper

—has often led to direst consequences between man and wife. The despotism of true love is, at times, frightful on this head; for without pausing to reason, it frequently gives way at once to the most devouring jealousy. When, therefore, we know that any want of circumspection on the part of the wife in her daily intercouse with such of her male friends as may have access to her fireside or table, is certain to be construed to her prejudice, and when such would be certain to disturb the spirit, and awaken perhaps the most fearful misapprehensions on the part of her husband, were he a proud, loving, and sensitive man, she can scarcely over-estimate the importance of the advice which we here offer, and which if followed rigidly, is sure to redound to her credit and happiness, and keep the light hovering about her hearthstone and burning brightly upon the altar of her own heart. As a general rule, then, no matter how intimate her gentleman friends may be with her husband, or how frequently they may find a welcome beneath her roof, there must still be observed towards them that chaste and prudent course of conduct which they will not be slow to respect, or to attribute to the right cause, and which may be indulged in without the slightest shadow of acerbity or detriment to even the most generous hospitality. The fact is, a woman in all her most exalted relations is something like snow,—the purity and lustre of which, as we all know, suffer to some extent, at least, from foreign contact.

But it must not be presumed that the husband is not equally bound to be strictly observant on his part, also, as to how he comports himself in the opposite direction. The usages of society, we are well aware, allows him a greater latitude in this sphere than it accords to his wife; but then there are proper limits set to it likewise; and the moment he transgresses them he also becomes rightfully the subject of censure, and is an aggressor against the peace and happiness of the being he vowed to protect and cherish with all the love and affection of which he is capable. Yet, while the wife admits that civilized usages permit him to move with greater freedom among females than is accorded to her in her intercouse with the males, she can determine, with the quick eye and intuition of her sex, when he transgresses the bounds of decorum, in her presence, or fails in the allegiance due to her alone, and treasures the wrong within her soul of souls. In this it is impossible for a husband to deceive with continuous success the perceptions and intuitions of the partner of his bed. There is about her that which fathoms and apprehends the most trifling approach

to infidelity or immorality on the part of the man she loves. No matter how silent or uncomplaining she may appear to be, she feels, from certain unexplainable indices perhaps, that all is not right; and thus the canker sets in, that, if she loves with all her soul and might, gradually destroys all that makes life worth an hour's purchase, saps her life-blood, and hurries her to an early grave.

These are truths which admit of no contradiction, and such being the case, the husband, in his turn, should, in his intercourse with the opposite sex, be just as careful and as sparing of the feelings of his wife as she of his. Nor need there be any sacrifice on the part of either, if both are pure and wise in their social relations. Let there not be a shadow of doubt or secrecy between them on any subject whatever. Let the one be as frank and generous to the other in every relation, as possible for man and wife to be, and let no difficulty respecting the conduct of either relative to a third party remain unexplained for a single moment. Let there be no secrets, no mystery, but everything between both as plain, as honest, and as open as the day, and much that might otherwise be dangerous or unpleasant will be obviated totally.

As in the unmarried state, so in the married, the selection of proper associates and friends is a matter of vital importance. No man or woman who is careless in this relation can fail to suffer from the circumstance. It therefore behooves the young husband to exclude from his house or fireside such persons of their acquaintance as are of loose or questionable habits, and who, beneath the mask of a pleasing exterior, conceal a heart given to deceit or lewdness. It is impossible not to suffer from frequent contact with such people; and for a husband to introduce any of them into his household is to thrust an indignity upon his wife, and subject her to influences the most unholy. There must, consequently, be no vacillation in the course to be pursued here. If a husband is aware, personally or by report, that a man, no matter what his social position, is of impure morals or even inclined to light speech or conduct, he must never be permitted, if at all possible, to breathe the same atmosphere as that inhaled by a pure and good woman beneath the roof of her own dwelling; for to subject her to inspiring it, after the contamination it must in some cases have suffered, would be a wrong so grievous as to be almost without a parallel.

In the same way the wife must be cautious and circumspect in relation to the choice of lady friends and acquain-

tances; and, above all things, before taking them to her bosom, she must be thoroughly satisfied of their uprightness, and purity of thought and action. The very attire even must not be overlooked, in the selection; for where a young or an old woman is gaudily or expensively dressed, when there is not the amplest means to sustain the folly, they are to be invariably regarded as undesirable companions,—while, should they even be possessed of adequate wealth, they may be generally set down as light, frivolous people, of contracted minds and unhealthy tendencies. There is no difficulty at all in recognizing those upon whom the young wife may properly rely for womanly aid and sympathy, when such are necessary. The chaste matron, of silvery locks, with her sweet, pure daughter, who has been brought up to feel her dependence upon heaven and her duty towards the whole human family, are of the class whose society should be cherished and prized by the interesting creature who may soon become a mother. Those of erratic ideas and disquieting influences ought to be studiously avoided; as their presence in any household is undesirable, from the fact that frequent contact with such persons often so blunt the sensibilities and confuse the sense of right and wrong, that domestic misunderstandings soon obtain, and the happiness that should attend a well-ordered family is marred, perhaps, forever. Intercourse with thoughtless and extravagant people, and especially those whose chief delight is gossip and dress, is especially dangerous to the young housekeeper of moderate means, as it awakens within her a spirit of emulation that is unworthy, and tends to create desires which outstrip her income and lead to the embarrassment of her husband. If a wife in limited circumstances will select for her companions such flimsy and gaudy creatures, she must soon find herself drifting into their reprehensible and expensive habits, or will, at last, begin to institute such inconvenient comparisons between their costly attire and her own neat and simple habiliments, as are likely to lead to discontent and such discomforting sentiments regarding her husband and her surroundings, as seldom fail to result in partial if not total estrangement of the one from the other. "Evil communications corrupt good manners," is an aphorism of undoubted truth and universal recognition; and in no circumstances of life has the force of the adage been more apparent, at times, than in those pertaining to the early marriage relations of young persons of moderate means. The examples of extravagance in dress, or in any other relation, among the companions of the inexperienced wife or those of

her youthful husband, are dangerous in the extreme, and should be avoided with constant and studious care. The duties of the household in the one case, and those out-door employments which generally obtain in the other, are never so well performed or attended to as when associated with ideas native to them, or imbued only with a desire to attain wealth or position upon an honest, reasonable, and useful basis,—which, after all, is the broadest and surest foundation that can be built on in any relation of life.

To succeed, then, in the marriage state, it may be laid down as a general rule, that the habits of both wife and husband shall be frugal, and their tastes congenial, to a great extent. If possessed of any antagonistic elements, their first and constant care should be to endeavor to harmonize them on the basis of love and chivalry,—the husband yielding a point on the grounds of the one, and the wife moving forward a step to meet him under the promptings of the other. And to this end all disputations, how trifling soever, ought to be eschewed with the greatest care. Out of mole-hills such as these, very frequently real mountains arise, and to the fatal disruption of all domestic ties. We have been taught that the gravest consequences sometimes arise out of trifles; and in no respect has the truth of this become more apparent than in the relations existing between man and wife. Let there, therefore, be the best and most loving understanding between both. If the husband has acquired any habit distasteful to his wife, and based upon no principle of utility or common sense, he should speedily abandon it; and if, on the other hand, the wife has any failing or foible which may be dispensed with to advantage, she will be wise in discarding it and affording her husband an opportunity of perceiving that she is willing to sacrifice—if sacrifice it may be called—whatever habits or traits of character are distasteful to him on her part. Through such mutual compromises they will learn to live a life of happiness, and each become more and more a part of the other.

But, whatever the wealth of a newly-married couple, the wife will always find it to her interest, both mental and physical, to cultivate frugal and industrious habits, as from these no inconsiderable portion of her health and enjoyment must accrue. No lackadaisical novel reader or victim of fashionable *ennui* has ever yet tasted the sweets of life, married or single, to the extent designed by nature. The woman who keeps her own household well in hand, or who manages it in some adequate degree at least, never spends a fruitless or tiresome hour. Time

never hangs heavily upon her hands; and as the comforts that obtain, or grow up about her, are in a measure her own creation, her enjoyment of them will be the more keen, and her pride in their existence more grateful and justifiable. There are no circumstances in life so well assured to any individual as to enable him or her, as the case may be, to assert that the encroachments of poverty have been made impossible. Often do we perceive the millionaire of to-day the beggar of to-morrow; and such being the undoubted fact, the woman is wise who renders herself to some extent independent of the whims of fortune, by accustoming herself to the performance of such household duties as are indispensable to her own comfort or that of her husband, and who keeps her fingers more or less engaged in the pursuit of some feminine occupation calculated to minister to her needs in the hour of necessity.

While making these observations, however, it must not be presumed that we ignore the culture of the mind or of the taste. On the contrary, the interests of both may be attended to with excellent results, if the manner of improving them be clearly understood. There is scarce an object in art or nature that does not afford a text to the sincere inquirer after truth; and as all knowledge lies in understanding the one and the other in the profoundest sense, this may be approached, to some extent, by those in even the most restricted circumstances, if they only begin at the right point and pursue their studies systematically.

To the accomplishment of this end, all trashy novels and exciting romances should be scattered to the winds; and pleasant, instructive books adopted in their stead, whenever a moment can properly be devoted to reading. There is nothing which so unfits a maiden or a young wife for her duties as the study of such characters as are presented in the sensational, yellow-covered literature of the day. From the perusal of such questionable works the very worst results accrue. Between the plane upon which such heroes and heroines live and breathe and the one upon which all sensible people exist, there is such antagonism as to make the one wholly incompatible with the other. Consequently, in indulging in the contemplation of such creations and circumstances as form the staple of a vast majority of the publications that now flood the market, is to make war upon common sense, and imbibe such sentiments and general views in relation to our responsibilities as are at once unhealthy and inadmissible. Interesting works, disclosing real knowledge in a popular and fascinating manner, such as those

on natural history, the manners and customs of the different peoples of the earth, interesting biographies, incidents of travel, and such like, are desirable at all times; and as we cannot but come in contact with works of fiction, our only care in this relation should be to select those of fine moral tendencies, that while they give a true insight into human character, and present vice and virtue in their proper colors, shall lead us on in the paths of progress and religion, until we attain the highest perception of our duties and obligations to the great Author of our being, and the mighty human brotherhood to which we belong.

These are considerations of the gravest importance. The young wife, to whom we now address ourselves more particularly, can not over-estimate their desirability. The moment she steps across her own threshold, she should, therefore, survey all the circumstances of the case, and begin her wedded life on the only true basis, if a future of usefulness and happiness is her aim. Good habits, like evil ones, grow upon one; so that the first move beneath her own roof should be taken with caution, and in the right direction. We all know how difficult it is to retrace a false step, or to redeem lost time. To begin well is a point achieved, and one of the greatest importance. The French have an axiom, "it is only the first step that costs," and a truer one has seldom been uttered. The intelligence must, indeed, be obtuse that cannot appreciate its force and its appropriateness at the present moment, or recognize the necessity, in relation to both our spiritual and our temporal well-being, of adopting industrious, moral, and temperate habits, as well as of never wearying in the pursuit of that which is calculated to strengthen them, and establish them on an immovable basis.

Another important desideratum relative to newly-married people is, the cultivation of each other's society when at all possible, and the constant study of each other's excellences. These latter traits of character must be kept persistently in the foreground, and be made, so far as practicable, to cover what defects may, at times, peep out on the part of either the wife or the husband. To err is human, and we cannot, therefore, expect absolute perfection in ourselves or in others, so that by taking an occasional peep into our own hearts, we shall be prepared, in a measure, to make allowances for whatever slight defects may be apparent in those who are near and dear to us. One of the strongest bonds of union between man and wife is that of mutual admiration of each other's society, a

similarity of tastes and intellectual pursuits, and a desire to minister to each other's edification and amusement. No day or hour should pass without the cultivation of the warmest sentiments in this connection, for although the circumstances of business may separate the husband from the wife for many hours daily, yet the magnetism of true love and affection can go forth on its subtle mission, and apprise both that their hearts beat in union, and that they are looking forward alike to the happy evening hour which shall re-unite them. A cultivation of such thoughts and the indulgence of such sweet anticipations will tend to cheer both during their hours of separation, and give the keenest zest to the moment when they shall again meet in a fond and welcome embrace. In this way they can, if they will, make their lives and their homes beautiful; and so prepare the way for the first little stranger who may bless their union, that it shall appear on this stage of existence under the most fortuitous circumstances, and draw its first inspirations in an atmosphere of purity and love, when its mysterious being had been fostered under the conditions indispensable to a healthy physical and mental organization, and in the absence of which the yet unborn babe is subjected to influences the most destructive, and that scarcely ever fail to manifest their baneful results in after years. How obvious, then, the necessity of considering, with the most profound caution and attention those characteristics and observances which are alone capable of making the marriage state at all desirable! Any laxness in this relation will, most assuredly, be attended with lamentable consequences; for the moment the bond of union between a newly-wedded couple becomes tarnished or in any degree a matter of indifference, it begins to dissolve in reality, and often, unfortunately, becomes impatient of the law that makes its total disruption a matter of difficulty or impossibility.

Concluding Observations.

Now that we have trodden the sweet mazes of courtship and stepped over the more sacred threshold of married life, we have found how necessary it is for the youth and the maiden on the one hand and the young married couple on the other, to harbor no desires or indulge in no practices calculated to mar the happiness which heaven intends should characterize both states of existence. Notwithstanding that we may moralize upon the the rottenness of society, and descant upon its multitudinous vices, it has virtue and decision enough left yet, to punish those

who violate its laws or usages in certain relations. Nor need there be the slightest misapprehension on this head. Corrupt as the age may seem to be, it does not hesitate, in all Christian communities at least, to denounce every man or woman of known immoral tendencies; and will tolerate in him or her absolute dishonesty rather than the absence of virtue, in the sexual acceptation of the term. We are, however, constrained to admit that the law or usage in this connection is more inexorable in relation to the woman than in that of the man. This is an injustice, but it is useless to kick against it, from the fact that it will always obtain. It is then of the most vital importance that both married and single should accept these facts fully; and, even upon the low plane of selfishness, avoid the transgression of those laws, and eschew indulgence in any excesses or improprieties attended with such disgraceful and embarrassing results.

But no matter how circumspect and cautious a young married or unmarried couple may endeavor to be in the observance of the duties appertaining to courtship or those belonging to wedlock, unless a sincere recognition of their responsibility to heaven and an ardent desire to do what is right in its sight underlie all their endeavors. Where we find, in either sex, the slightest tendency to matrimonial relations, we must pre-suppose a matured understanding, to some extent at least, and be influenced by the inference that the hour of accountability has arrived. Hence the necessity, on the part of the young who approach the threshold of matrimony, and those who have just crossed it, of cultivating a proper reverence for things of a divine nature, and of asking daily if not hourly for that desire to do right and that strength to perform it which comes only from above. The soul that becomes wholly absorbed in mere selfish gratifications and the pursuits of wealth, however, has fallen from its high estate, and estranges itself from the enjoyment of true earthly happiness; for there can be no God where the love of gain reigns supreme. Industrious habits and a laudable desire of independence, are quite compatible with our duty towards the Creator and our fellow men; and this is the more obvious, as our worldly prospects are invariably enhanced through a strict performance of our obligations in this direction. The day that is begun with a clear perception of our responsibilities, and a determination, under heaven, to perform them, come what may, generally terminates happily, and lays the foundation for a morrow more cheerful and prosperous still. The life is more than meat and the body more than raiment;

and as we minister to both daily, so shall our reward be. Although disgusting and ruinous above all things, that sloth and idleness whose doom is misery and whose costume is rags, it is scarcely more reprehensible than that devouring love of gain which so petrifies the heart as to make it impervious to any of those ennobling sentiments which dignify humanity and link us to the skies. We have evidence upon evidence of the truth of this assertion, and are only surprised at such constantly recurring examples before our own eyes of the fact that the struggle for material wealth on the part of both married and single continues, in so many cases, to be at the expense of soul and body.

No man or woman, whatever his or her condition or years, can enjoy this life to the fullest, without sufficient rest and recreation. The quality and quantity of food, or of the textile fabrics from which clothing is manufactured, may be modified to some extent to meet our emergencies, but evil ensues at once should we deny ourselves sufficient sleep, or such recreation as may be necessary to recuperate our energies, both mental and physical. There is nothing gained by overtaxing our powers in any relation whatever, for nature will assert her claims, and rebel against any persistent encroachments upon her rights, in the ultimate form of disease or death. In the pursuit of their daily avocations, then, those who are constrained to labor for their bread must be cautious that they not permit their whole existence to be absorbed in the struggle to obtain this world's goods; but rather, when the legitimate hours for labor have been industriously spent, give themselves up to the culture of their minds; and, if married, to those fireside joys in which the cares of the day are so soon forgotten, and which tend to both form and confirm those habits of temperance and moral excellence, without which life becomes a burden, and the ends of creation are frustrated.

The desire to accumulate wealth, however laudable, is attended with great danger, and should never be permitted to gain too great an ascendency over us. And here is just where the golden mean should be observed; and happy is the young husband or wife who is able to adopt it understandingly; and, while they labor to better their circumstances should they be restricted, persistently regard whatever gold they may acquire as simply an agent for good, placed within their control by Providence, and who, winning it upon an upright, humane, and generous basis, overtaxes neither body nor mind in its acquisition. And then, again, supposing fortune should prove adverse,

and cause the light to burn low upon the hearthstone of the frugal, industrious, moral, and loving pair, how beautiful may the mission of both become if they only regard their lot as apportioned to them by Him who makes all things work together for good. Should such a conviction obtain on the part of the wife, while the influence of religion enables her to bow meekly to the chastening rod, then shine forth those angel qualities which are more luminous than light itself, and which go far to rob the darkest hour of its gloom. And cold indeed must be the heart of the husband that could be insensible to the benign influence of such a worthy helpmeet, or that could not sympathize with those noble efforts to render his lot less burdensome, and to prompt him to still labor and hope on with cheerful resignation. It is in this relation, as in all others of adversity, that the angel in the pure woman most shines forth; and, feeling as we do, that not only here, but in various other directions, her mission is one of the most exalted, we are anxious that no untoward circumstances shall be permitted to embarrass it in the way of habits or associations, and that she shall be always surrounded by those only who are examples of goodness and of truth, and who feel that the highest aim of human existence is to glorify the Creator in endeavoring to attain the most exalted point of mental, moral, and physical excellence.

As observed in a former portion of our remarks on the training of the young of both sexes, much of the success that is hoped for, will, if it ever obtain, be based mainly upon the foundation laid in childhood by their parents. And here we again advert to the grave responsibility which attaches to the latter respecting the education and the formation of the habits of their children. In this connection we have endeavored to point out with the utmost clearness the prominent rocks and quicksands upon which even children have been early wrecked; and in following up the question have shown that our remarks applied equally to the case of the youth or maiden who was verging towards the momentous though fascinating precincts of matrimony. We have intimated, also, that the condition of the wife during pregnancy and the rule of her temper influenced her offspring to an extraordinary extent. This latter is a fact of such tremendous importance, that it ought to be engraven upon the heart of every young maiden, and upon that of every wife who is likely to become a mother; for it has been ascertained beyond a shadow of doubt that the indulgence of angry passions, tempers, or humors, during pregnancy, or while the child yet hangs at the breast, is almost invariably fraught with the direst

consequences to the unsuspecting and helpless little stranger. Should any disquieting influences continue to disturb the young wife at such periods, the babe, whether born or unborn, carries in its physical structure or in its mental, the terrible impress of the fact through life; so that not only must the embryo be conceived under circumstances the most desirable—whether mental, moral, or physical—but be nursed in this atmosphere until it reaches that stage of maturity when it is to be born a child into this world. In fact, it is now thoroughly understood that at the moment of conception the frame of mind in which either parent may be, or the leading sentiment which pervades the mind of either—or again the physical condition of either—is sure to impress itself in these relations upon the mysterious entity which is yet to live and move and breathe; and such being the case, we shall lend further weight to our remarks on this vital topic, by extracting the following important observations on the subject from a recent work of a well known physician:

"In France, one person out of every thirteen hundred becomes subject to legal punishment. But of infants abandoned in the streets by their mothers, one out of every one hundred and fifty-eight reaches the State Prison. With this view, eminent men have advised that it would be better to let them all die. But this shows the importance of parental training. The parents should mould the character of their children, not only after they are born, but before. It is the taint in the blood, the mental and moral conditions of the mother while the infant feeds on her milk. A case lately occurred where the mother became uncontrollably enraged at her husband. In half an hour she calmed down and put her infant to the breast; it fell into convulsions, and died.

"Other cases are given, leading to the inference that if within an hour or two of any violent mental emotion the impregnating act follows, the offspring has that predominating trait through life. Nothing else so well accounts for the diversity of character among children of the same parents. The idea merits thoughtful consideration, that a temporary condition of the mind, of a very decided character, impresses itself on the offspring. That condition of mind may not be common to either parent, may not exist once in a year, but its existence gives the tinge—the hue—to temperament and constitution. Aaron Burr's father was a clergyman, the son of a clergyman, and of irreproachable character; his mother the daughter of a clergyman, of mind and morals and social position nowhere excelled—

seldom equaled. The youthful pair were brought up in all the innocence and purity of a model family of educated, elevated Christian principles. But impure thoughts come to all at times, —so do doubt and infidelity to the Christian faith. These may have existed at critical times during gestation in the mother, or previously, in the father; for the offspring was a compound of mental power and moral degradation—villainous, traitorous, unprincipled, and impure."

We now draw these brief articles to a close; but before penning the last sentence, we would implore parents and guardians, and all concerned, to ponder long and seriously over the solemn and important truths they contain. No more vital subject can possibly engross the mind of a man or that of woman, inasmuch as it involves the health and happiness of the rising generation, as well as the interests of millions yet unborn. To parents especially, we would address a few concluding words; because, as we have already observed, upon them rests, in a measure, the great weight of the responsibility relative to the future of their children and their bearing upon society, not to speak of their final happiness when they shuffle off this mortal coil.

We need not recapitulate the arguments we have used, or the facts we have multiplied so copiously. The way is plain to the most perfect success, if it is only trodden cautiously, cheerfully, and with reliance upon the Divine Will. Let them then to whom God has given increase, accept the trust at His hands in a proper spirit, determined to do their duty whatever betide, and there is not the slightest fear of the result. And let the maiden and her lover, and the wife and her husband, learn in the same spirit of love and meekness, relying on each other mutually for assistance, under heaven, in carrying out the precepts and instructions here laid down, and all will be well.

THE TOILET:

NEW, SIMPLE, AND EFFICIENT PREPARATIONS.

The Hair.—A thick, handsome head of hair is generally acknowledged to be a good thing to have. Many do possess it, and many others might, but from sheer neglect in the care of this "divine ornament." The scalp should be kept clean and free from scurf, dandruff, and the dirty accumulations caused by the use of oily hair preparations, etc. Everybody knows this, and yet how generally neglected is the care of the hair and scalp.

Hair Wash.—An unequaled hair wash for cleansing the the scalp and hair from all impurities is a tablespoonful of hartshorn in a pint of water. Rub thoroughly into the hair and over the scalp, and then wash the head with clear water.

The use of this wash once or twice a week, renders the hair and beard soft and glossy, and greatly promotes its growth.

Dandruff.—A Cure.—After the scalp and hair have been purified of dirt and dandruff by use of the above wash, future annoyance from dandruff can be prevented by dampening the scalp three or four times per week (oftener if necessary) with sulphur-water, made by putting one-half ounce of flour of sulphur into a pint of water, shaking occasionally for two days, and then pouring off into a clean bottle. This "cure for dandruff" is new and of great value. The neglect of keeping the scalp free from those scaly particles known as dandruff shows a lack of personal cleanliness not particularly commendable. A lady with her hair powdered with scurf is not particularly angelic ; and a gentleman with his coat-collar whitened with dandruff is surely not a fascinating object.

Hair Preparations.—As the hair of but few persons is sufficiently oily of itself to be of desirable appearance, and to keep in a proper position, the use of various hair preparations is almost universal. A fine article is made as follows:—

Strong alcohol, 1 pint; castor oil, 2 ounces ; Tincture of Spanish flies, 2 drams; Oils bergamot and lavender, of each, 10 drops.

Nothing superior to the above was ever made. It is not too greasy to be objectionable. It renders the hair glossy and silken, and is sufficiently stimulating to prevent the hair from falling out, and often induces an unusually fine growth, and not the least, it is cheap, and quickly made.

Glycerine Washes.—Glycerine washes, for the hair, are objectionable. They render the hair disagreeably sticky, causing it to "catch dirt" to such an extent that the scalp must be washed every few days, in order to keep it in a wholesome condition.

Pomatums.—Pomatums are liable to nearly the same objections. Besides, they are almost without exception made of lard, which is liable to become rancid and acrid, thus irritating the scalp, and not unfrequently causing sores.

Gray Hair.—Hair-Dyes.—From various causes, generally unknown, the hair turns prematurely gray. Nothing will restore it to its original natural color, but it can be artificially colored so as to be quite of satisfactory appearance.

The quantity of hair-dye used in this country almost exceeds belief. The very best, because producing an almost perfectly natural color, and at one time the most popular, was the well-known sulphur and sugar of lead dye.

A year or two since an editor in a western city died from the effects of this poisonous dye. The newspaper immediately made a hue and cry; chemists analyzed and warned; doctors cautioned their patients; the result has been that the use of the preparation has decreased largely. Still it is extensively used, and it is to save many from possible disease and death that we have given so much space to the notice of this most dangerous article.

"But I am not old, and my hair is turning gray,—what shall I do?" Well, if you *will* color your hair, use only such dyes as are known to be harmless—which are the "silver dyes," almost the only kind in the market.

The following simple "hair stain" has no superior. Put into a perfectly clean bottle:—

Nitrate of silver, 75 grains; Ammonia, 1 ounce; Alcohol, 3 ounces. Water, 9 ounces.

Keep the bottle well corked in a dark place. The hair should be well cleaned with soap and warm water, and then wiped dry, before each application. The stain is used by combing the hair thoroughly with a fine comb dipped in the preparation; no washing is required after the operation. The first application gives a reddish-brown color. The second a brown,

and the third a black color. After each application expose the head to the sunlight for fifteen or twenty minutes, if convenient, then oil and keep well oiled.

Gentlemen will find this a most satisfactory article for obliterating white hairs among their whiskers, and for "touching up" the beard or moustache to any shade desired.

To give "hair-dye receipts" here we think would be superfluous, as numbers of them can be found in any of the one or more "receipt books" that almost every family possesses.

Curling the Hair.—Preparations are being continually advertised that are claimed will cause the straightest, stiffest hair to curl in wavy, massive ringlets. A genuine swindle. Nothing but mechanical means—the curling-iron, etc., will cause the hair to curl, or crimp, in the slightest degree.

Hair artificially curled is not becoming, while the twisting process around the wood or iron breaks the fibres of the hair and seriously injures it.

Bandolines.—Bandolines for the hair, are preparations entirely free from grease for keeping the hair in place, giving it a glossy appearance, etc. One of the best, and most simple, is made by pouring a teacup of boiling water, on ten or fifteen quince-seeds; strain, pour into a bottle, and add five drops of the oil of cloves or cinnamon.

Two Hair-Brushes.—Every person should be provided with two hair-brushes—an ordinary brush of good stiff hair, the other a friction or shampoo brush of stiff, black, uneven hair. Before dressing the hair in the morning, the scalp should be thoroughly "polished" with the shampoo brush. Nothing gives such tone and vigor to the scalp, and prevents a tendency to fall out. It is an excellent sanitary operation in other respects. A person who of a morning gets up drowsy and unrefreshed, after giving his scalp a brisk rubbing with the stiff brush, will experience a surprising change in his feelings for the better. A brisk friction of the scalp in a like manner will often cure headache.

Character as Indicated by the Hair.—Stiff, straight and abundant hair and beard are combined with a character which is straightforwad, unyielding, strong, and rather bluff.

Fine hair and dark skin, show purity, goodness, and strong mind.

Black hair, a dark skin, and bilious temperament are usually found together. There is strength of character and sensuality.

Fine brown hair indicates exquisite sensibility, with strong will for what is good and right, if not perverted.

If the hair is coarse, black, and sticks up, there is not much talking, and the person is apt to be stubborn, sour, and harsh.

White hair, as a general rule, indicates a good, easy, lazy fellow. There is animosity in coarse red hair, with unusual firmness of purpose and strength of character. Hasty, impetuous, rash people, have curly and crispy hair. Red hair indicates a fiery temperament, passion, and devotion. Auburn hair, which is hair of a golden hue, having a yellowish tinge, with a florid face, gives purity, intensity, and great capacity for enjoyment and suffering. Wavy hair is pliable, yielding, accommodating. The dark-haired races—the Spaniard, the Malay, the Mexican, the Indian, and the Negro, have physical strength, endurance, robustness in body. The light-haired races are the thinkers of the world, the poets, and the artists. Dark-brown hair combines the two, and is the most desirable.

Pimples, Flesh-Worms, or "Black-Heads."—The skin is a marvelous piece of lace-work, through the interstices or pores of which there is constantly escaping insensible perspiration and an oily secretion.

In a torpid condition of the skin there appears on the face, nose, and lower part of the forehead of many persons, what are called "black heads," "flesh worms," etc.,—often in great numbers, and causing an exceedingly disagreeable appearance. When the skin is pressed with the finger-nails, they come out in vermicular form, having a black point or head, which gives rise to the name grubs, or flesh-worms, which they are, being real, living worms, which has been ascertained by microscopical examination.

They can generally be permanently removed by pressing them out with the finger-nails, and then bathing the parts with mild salt water. The skin should receive gentle friction daily with a coarse towel.

Pimples, Red and Matterated.—If these are the result of an inactive liver, disordered digestion, or constipation, proper means must be employed to remove these ailments. Nothing will accomplish this more effectually and harmlessly than the use of the following pills: Strychnia, 1 grain; quinine, 1 scruple; leptandrin, 1 dram; hydrastin, 15 grains.

Make into thirty pills, one to be taken immediately after breakfast, daily.

Pimples are generally the result of an inactive and unhealthy condition of the skin. A cure is generally accomplished by the use of the following: Corrosive sublimate, 8 grains; muriate of ammonia, 30 grains; water, 1 gill.

Bathe the pimples twice daily with this wash, using a bit of soft cotton cloth. Carbolic soap or pine-tar soap, to be bought in almost any drug store, dipped in water and rubbed over the pimply portion of the face, usually proves an effectual cure.

Freckles, Brown Spots, Moth Spots.—A peculiar chemical combination of iron and oxygen in the blood of many persons produces that appearance of the skin known as freckles, moth-patches, brown spots, etc. It is no question of health—those most freckled being generally blessed with most vigorous health. Those with very light or red hair (which is caused by red-colored oil, more strongly impregnated with iron than others), are most liable to freckles, etc.

The proper means of removing freckles and moth-patches is in the use of those chemicals which will dissolve and dissipate the existing combination situated in the second or middle membrane of the skin. As those with freckly faces have very naturally an intense desire for a clear skin, it gives us pleasure to be able to give here a new and positive cure for freckles, etc.: Sulpho-carbolate of zinc, 2 parts; glycerine, 25 parts; Rose-water, 25 parts; alcohol, 5 parts.

Apply twice daily, and let remain from one-half to one hour. Then wash with cold water.

To improve the complexion: Corrosive sublimate, 10 grains; Oxide of zinc, ½ dram; Muriate of ammonia, ½ dram; Soft water, ½ pint.

Use a piece of soft cotton cloth, and apply once or twice daily, slightly moistening the skin. The above has been extensively used for the removal of freckles, and other discolorations of the skin. A simple and excellent cosmetic for softening, whitening, and beautifying the complexion and hands, is made by mixing four parts of the yellow of an egg and five parts of glycerine, and rubbing them well together with a pestle. Apply to the face on going to bed. Rub well into the hands after each washing. It will keep for years, and is an admirable preparation for all bruises of the skin.

The use of paints and powders, however harmless they may be of themselves—as powdered starch—clogs the pores of the skin, and it becomes rough, sallow, and wrinkled, and often pimply; and a painted or powdered woman is such an unlovely object!

The Teeth.—Probably less attention is given to the care of the teeth than to any other part of the body. Yet the teeth are the first importance! But comparatively few rinse the

mouth regularly after eating, or use a tooth-pick habitually. And food clogged between the teeth is such a disgusting sight! It ferments—rots, giving the breath a bad smell, and causing the teeth to decay.

Besides the use of a tooth-pick, and rinsing the mouth after eating, the teeth should be thoroughly scrubbed with a good stiff tooth-brush at least once a day,—on retiring for the night is the best time, using cold water. The teeth of many persons can not be kept clean and white without the use of a powder. The following is good, cheap, and safe:—Prepared chalk 4 ounces; Orris-root (powdered), 2 ounces; Green myrrh (powdered), ¼ ounce; Oil of cinnamon, 20 drops.

Keep in a corked bottle.

Charcoal irritates the gums, and no preparation containing it should be used. Soap and soap preparations give the teeth a yellowish appearance, and hence are decidedly objectionable.

Ill-Smelling Breath.—If caused by filthy teeth or a decaying tooth, the remedy is plainly to clean the teeth, and to have the offending tooth filled or taken out.

If the cause is from a disordered stomach, of course the breath will be offensive till the digestion becomes good again, by due attention to diet, and proper medication.

But the breath of many persons is ill-smelling from no apparent cause. Such persons can render the breath sweet temporarily at any time by chewing a kernel of roasted coffee.

The Feet.—In cities, the facilities for taking a hot bath are so many and convenient that every respectable person feels himself bemeaned if he does not occasionally give himself a good scrubbing with soap, brush, and hot water. But in villages and the country proper, things are different. To attempt a bath in a washtub placed in the barn or back kitchen can not be considered particularly convenient; and the result is bathing in the country is not the general practice. One consequence is a good many feet that give forth exceedingly bad smells!

The pores of the soles of the feet are much larger than on any other parts of the body, and they pour out a large amount of perspiration, which condenses, mixes with dust and dirt, and forms that hard scaly crust that almost every person has noticed at some time on the soles of their feet. Wearing tight boots or shoes the perspiration is confined—there is no "ventilation," and the result is about the feet of many persons, especially men, a most rottensome smell. Soak the feet ten or fifteen minutes, at least once a week, in a pail of hot water,

well soaped, and then giving them a thorough scraping with a stiff-bladed knife. This will prevent all danger of bad smells from the feet, and add much to your feeling of personal comfort, at the same time lessening the liability of taking cold. Those who keep their feet scrupulously clean are much less liable to cold feet—have warmer feet in winter—than those who do not.

The feet can be kept comfortably warm on an excessively cold day by wrapping a piece of newspaper about the feet over the stockings, and then drawing on the boots.

VALUABLE MISCELLANEOUS INFORMATION.

Consumption.—Cod-Liver Oil.—Fatty Food.—Masses of crude unorganized matter, containing coagulated albumen and half-formed cells, and called *tubercles*, are frequently found in the lungs, producing *tubercular consumption*. The immediate cause of the disease is an abortive or perverted nutrition, tubercle being produced instead of true tissue.

It has been lately maintained that the faulty nutrition which results in tubercle, is caused by deficiency of oily substances, and therefore such of these substances as are easiest digested and absorbed have been indicated as remedies. Cod-liver oil has come into general use for this purpose. Dr. Bennett, who first introduced this oil to the attention of the English and American public, states that butchers, cooks, oil-men, tanners and others who are constantly coming in contact with fatty matter, are less liable than others to tubercular disease; and Dr. Simpson has observed that children and young people employed in wool-factories,where large quantities of oil are daily used, are generally exempt from scrofula and pulmonary consumption. These facts would indicate that even absorption of fatty matter through the skin may powerfully influence nutrition.

Dr. Carpenter observes: "There is a strong tendency and increasing reason to believe that a deficiency of oleaginous matter, in a state fit for appropriation by the nutritive processes, is a fertile source of diseased action, especially that of a tubercular character; and that the habitual use of it in larger proportion would operate favorably in the prevention of such maladies, as cod-liver oil unquestionably does in their cure. A most remarkable example of this is presented in the population of Ireland, which, notwithstanding the concurrence of every one of the circumstances usually considered favorable to the scrofulous condition, enjoys a most remarkable immunity from it, without any other assignable cause than the peculiarly oleaginous character of the diet usually employed."

Dr. Hooker, in a recent report, says: "First, of all persons between the ages of fifteen and twenty-two years, more than one-fifth eat no fat meat. Second, that of persons at the age of forty-five, all excepting less than one in fifty, habitually use fat meat. Third, of those who have abstained, a few acquire the appetite for it, and live to a good old age, while the great proportion die of consumption before forty-five. Fourth, of persons dying of consumption between the ages of fifteen and forty-five, nine-tenths at least have never used fat meat."

Dr. Chambers says: "The effect of cod-liver oil becomes less and less a marvel the more we know of physiology. An easily assimilated oil comes, in fact, into the short list of life-giving articles in the pharmacopœa, for it is itself the material by which life is manifested. Hence under its use, beneficial influences are exerted throughout the whole body; old wounds and sores heal up; the harsh, wrinkled skin regains the beauty of youth; debilitating discharges cease, at the same time the normal secretions are more copious; the mucus membranes become clear and moist, and are no longer loaded with sticky spithelum; the pulse, too, become slower,—that is to say, more powerful, for abnormal quickness here is always a proof of deficient vitality. To find the easiest assimilated oil, and to prepare the digestion for the absorption of oil, are the main problems in the cure of consumption."

Bed and Bedding for the Sick.—A patient's bed should always be in the lightest spot in the room, and he should be able to see out of a window. It is scarcely necessary to say that the old four-post bedstead, with curtains, is utterly inadmissable, whether for the sick or well. Hospital bedsteads are in many respects very much better than private ones.

There is reason to believe that not a few of the cases apparently resembling scrofula among children proceed from the habit of sleeping with the head under the bed-clothes, and so inhaling air already breathed, which is further contaminated by exhalations from the skin. Patients are sometimes given to a similar habit, and it often happens that the bed-clothes are so disposed that the patient must necessarily breathe air more or less poisoned by exhalations from the skin. A good nurse will be careful to attend to this. It is an important part, so to speak, of ventilation.

It may be worth while to remark that where there is any danger of bed-sores, blankets should never be placed under the patient. It retains damp, and acts like a poultice.

Never use anything but light blankets as bed-covering

for the sick. The heavy cotton and impervious counterpane is bad, for the very reason that it keeps in the emanations from the sick person, while the blanket allows them to pass through. Weak patients are invariably distressed by a great weight of bed-clothes, which often prevents their getting any sound sleep whatever.

A word about pillows. Every weak patient, be his illness what it may, suffers more or less from difficulty in breathing. To take the weight of the body off the poor chest, which at best is hardly up to its work, ought, therefore, to be the object of the nurse in arranging the pillows. Now what does she do, and what are the consequences? She piles the pillows one upon the other like a wall of bricks; the head is thrown upon the chest, and the shoulders are pushed forward, so as not to allow the lungs room to expand. The pillows, in fact, lean upon the patient, not the patient upon the pillows. It is impossible to give a rule for this, because it must vary with the figure of the patient.

Tall patients suffer much more than short ones, because of the drag of the long limbs upon the waist. But the object is to support, with the pillows, the back below the breathing apparatus and above the hips, so as to allow the shoulders room to fall back, and to support the head, without throwing it forward. The suffering of the exhausted patient is greatly increased by the neglect of these points. And many an invalid, too weak to drag about the pillow himself, slips his book or anything at hand behind the lower part of his back to support it.

The Importance of Keeping the Skin Clean.—It has been ascertained by actual computation that there are 2,800 holes or pores in every square inch of the human skin. The number of square inches of surface, in a person of ordinary height and bulk, is 2,500; the whole number of pores, therefore, is 7,000,000. Each of these pores is the aperture or mouth of a little tube, about a quarter of an inch long, called the perspiratory tube, and the amount of these for the entire body is 48,000 yards, or nearly twenty-eight miles. Twenty or thirty ounces of perspiration escape through these channels daily, and upon evaporating into the air, leaves a residue upon the surface of animal and saline matter, consisting of acids, alkalies, calcareous earth, etc.

It is a curious fact illustrating the necessity of cleanliness and of keeping the pores of the skin open, that if a coat of

varnish or other substance impervious to moisture be applied to the exterior of the body, death will ensue in about six hours. The experiment was once tried on a child in Florence. On the occasion of Pope Leo the Tenth's accession to the papal chair, it was desired to have a living figure to represent the Golden Age, and so a child was gilded all over with varnish and gold-leaf. The child died in a few hours. If the fur of a rabbit or the skin of a pig be covered with a solution of india-rubber in naphtha, the animal ceases to breathe in a couple of hours.

Indications of Long Life from the Lobes of the Ear.—The physician can assure the patient with long lobes, in the absence of malignant disease, of the probability of long life. He can speak with more confidence in regard to recovery from either acute or chronic diseases, when the lobe is long than when it is short. Nor will he fail to observe that a large proportion of sickly people have a short lobe, or none at all.

Where a naturally strong constitution has suffered from excesses, the long lobe has become withered and wrinkled. And when one side of the brain, as indicated by a seated pain, has suffered more than the other, he will find the lobe of that side more withered than the other. Whatever tends to enfeeble the constitution, whether excessive toil, study, or venery, contributes to the change in the lobe.

Benefits of Laughter.—Probably there is not the remotest corner or little inlet of the minute blood-vessels of the body that does not feel some wavelet from the great convulsion produced by hearty laughter shaking the central man. The blood moves more lively—probably its chemical, electric, or vital condition, is distinctly modified—it conveys a different impression to all the organs of the body, as it visits them on that particular mystic journey, when the man is laughing, from what it does at other times. And thus it is that a good laugh lengthens a man's life by conveying a distinct and additional stimulus to the vital forces.

The Pulse.—The healthy pulse of an adult male person, of large and expansive frame, should be moderately full, even, and number from seventy to seventy-five beats in a minute.

The healthy pulse of an adult male person, of smaller frame and proportions, should, in general, number from seventy-two to seventy-eight beats in a minute. The healthy pulse of an adult female should number from eighty to eighty-five beats in a minute. The healthy pulse of a young person, from seven to fourteen years of age, should number from eighty to eighty-six

beats in a minute. The healthy pulse of a child under seven years old, from the period of teething, may be stated at from eighty-six to ninety-six beats a minute. The healthy pulse of an infant, before teething, may be placed at from one-hundred to one-hundred and twenty beats a minute, according as the child is robust or weakly; the robust infant generally exhibiting a less frequent but stronger pulsation. The healthy pulse in old age may be stated, for the male at from fifty-five to sixty-five beats; and for females, at from sixty-five to seventy beats in a minute.

The main point in all ordinary ailments is the rapidity of the pulse, seventy beats in a minute being the average standard in health, in middle life; all above that indicates that the heart is excited, and is exhausting the vital forces. The quicker any machine runs, the faster it wears out; so with the body; in proportion as the heart is beating over seventy in a minute, fever is wasting the system.

The pulse of the consumptive is always fast, generally over ninety, gradually increases, and the consumptive certainly dies.

A pulse of seventy-five indicates fever: if at ninety or a hundred, a high fever.

If the pulse is simply fast, it is fever; if it is fast and hard, beats like the vibration of a string tightly drawn, it is inflammation, and there is danger always. The pulse is infallible as an index of inflammation in any part of the body; it is immaterial where it is, the wrist says it is in the body somewhere, and always alarms the physician.

Milk as Food.—As an article of diet it would appear that the nutritive value of milk, as compared with other articles of animal food, is not generally appreciated. There is less difference between the economical value of milk, beefsteak, eggs, or fish, than is commonly supposed. The quantity of water in good milk is 86 to 87 per cent, in round steak 75 per cent, in fatter beef 60 per cent, in eggs about 68 per cent. From several analyses recently made, it is estimated sirloin steak (reckoning loss from bone) at 35 cents a pound, as dear as milk at 24 cents a quart; round steak at 20 cents a pound, as dear as milk at 14 cents a quart; eggs at 30 cents a dozen, as dear as milk at 20 cents a quart; corned beef at 17 cents, as dear as milk at 15 cents. The result from these deductions seems to be that milk at even 12 cents a quart is the cheapest animal food that can be used.

Granting this to be true, another question arises, which

must be settled if we would expect to derive the full benefit of using milk as an article of diet. It is known by experience that milk does not equally agree with all persons—in the case of some, producing headache and feverish symptoms, and in others giving rise to biliousness. These consequences are no doubt owing in a measure to the peculiar idiosyncrasy of those thus affected; but before it can be adopted as an article of diet it should, as far as may be, be rendered free from these objections. In order to do this, it would be well to first understand the cause of the difficulty. Milk, after being taken into the stomach, is converted into almost a solid curd by the heat, and the acid given off by that organ combining with potash and the soda which the milk contained, and which was necessary to keep it in a state of solution. The watery portion being separated and absorbed, the gastric juice finds it difficult to penetrate and break down the remaining curd, which now acts as a crude indigestible substance in the stomach, giving rise, by reflex action, to headache, and, by its irritating presence, interfering with the digestion of other substances that may be going on. In consequence, the contents pass out of the stomach in an imperfectly digested condition, and in their subsequent course through the system are not properly assimilated; and on arriving at the liver, clog that great strainer of the blood. The bile not being properly poured out of that organ, the blood in passing through, it becomes impregnated with bilious matter, which is carried on through the round of the circulation, showing its effects in the yellow tinge of the eyes and the skin, and occasioning those general unpleasant symptoms comprehended under the term of biliousness.

In order to render milk more digestible, its particles should be divided, which can be effected by bread, or some other farinaceous article. When cooked with rice and eggs (rice pud ding), it forms the type of a proper food,—containing nitrogen, phosphates, and starch. Milk, when used as a drink, should be boiled, then diluted with water. The solid matter of milk constitutes a little more than 12½ per cent of the whole, of which more than one-third is casein, or the cheese principle, about one-quarter is butter, and the balance sugar and salts. Of these substances, the butter and the sugar supply heat to the body, while the casein contains tissue-making material in a most concentrated form.

Man Mostly Water.—The living animal is made up for the most part of water. A man of 154 lbs. weight contains

116 lbs. of water, and only 38 lbs. of dry matter. From his skin and his lungs water is continually evaporating. The amount of water thus evaporated is $3\frac{1}{2}$ lbs. daily, of which one-third comes from the lungs and one-third from the skin. Were the air around him perfectly dry, his skin would become parched and shriveled, and thirst would constantly oppress his fevered frame. The air which breathes from his lungs, is loaded with moisture. Were that which he draws in entirely free from watery vapor, he would soon breathe out the fluids which fill up his tissues, and he would dry up into a withered and ghastly mummy. It is because the simoon and other hot winds of the desert approach to this state of dryness, that they are so fatal to those who travel on the arid waste.

All about Colds.—How to avoid them.—How to cure them.—Millions of canals or tubes from the inner portions of the body open their little mouths at the surface, and through these channels, as ceaseless as the flow of time, a fluid containing the waste and impurities of the system is passing outwards, and is emptied out on the skin. Ordinarily, it is so attenuated so nearly like the air, that it cannot be seen with the naked eye, but extraordinarily, under the influence of increased natural or artificial heat, as from exercise or fire, this fluid is more profuse, and is seen and known as "the sweat of the brow"—perspiration.

This fluid must have exit, or we die in a few hours. If it does not have vent at the surface of the body, it must have some internal outlet. Nature abhors shocks as she does a vacuum. Heat distends the mouths of these ducts, and promotes a larger and more rapid flow of the contained fluid; on the other hand, cold contracts then, and the fluid is at first arrested, dams up, and rebounds. If these mouths are gradually closed, nature has time to adapt herself to the circumstances by opening her channels into the great internal "water-ways" of the body, and no harm follows. Hence the safety of cooling off slowly after exercise or being in a heated apartment, and the danger of cooling off rapidly, under the same circumstances, familiarly known by the expression "checking the perspiration."

The result of closing the pores of the skin is various, according to the direction the shock takes, and this is always to the weakest part. In the little child it is to the throat, and there is croup or diphtheria; to the adult it is to the head, giving catarrh in the head or running of the nose; to the lungs, giving a bad cold, or, if very violent, causing pneumonia

or inflammation of the lungs themselves; or pleurisy—inflammation of the covering of the lungs; to the bowels causing profuse and sudden diarrhœa, or to the covering of the bowels, inducing that rapid and often fatal malady known as peritoneal inflammation; if the current is determined to the liver, there is obstinate constipation, or bilious fever, or sick headache. Hence a "cold" is known by a cough, when the perspiration is driven inward, and is directed to the lungs; by pleurisy, when to the lining of the lungs; by a sick headache or bilious fever, when to the liver, etc.; diarrhœa or constipation, when to the bowels and liver.

To avoid bad colds, then, it is only necessary to avoid closing the pores of the skin, either rapidly, by checking perspiration, or slowly, by remaining still until the body is thoroughly chilled, that is, until the pores are nearly or entirely closed by inaction in a cold atmosphere or room. In the matter of health, these suggestions are of incalculable importance. The more clothes a man wears, the more bed-covering he uses, the closer he kees his chamber, whether warm or cold, the more he confines himself to the house, the more numerous and warm his night-garments, the more rapidly will he take cold, under all circumstances, as the more a thriftless youth is helped, the less able does he become to help himself.

Many a cold, cough, and consumption, are excited into action by pulling off the hat or overcoat as to men, and the bonnet and shawl as to women, immediately on entering the house in winter, after a walk. An interval of at least five or ten minutes should be allowed, for however warm or "close" the apartment may appear on first entering , it will seem much less so at the end of five minutes, if the outer garments remain as they were before entering. Any one who judiciously uses this observation, will find a multifold reward in the course of a lifetime.

Note.—On rising in the morning, give the entire person a few minutes' smart friction with a long-handled "flesh-brush." The effect is most exhilarating, and the skin soon acquires such tone and vigor that you will be quite safe from the danger of "catching cold."

To Cure a Cold Quickly.—As soon as possible after taking cold, go to bed in a warm room, covering yourself with at least two extra blankets. Put twenty drops tincture of aconite into half a glass of water, and take a teaspoonful every half-hour till a profuse perspiration is induced.

If the aconite is not at hand, drink a bowl of hot ginger or

sage tea. Eat no supper—not a mouthful—and on the following morning the chances are you will be quite well again.

When a person takes a cold it will "settle" in the head, throat, chest, bowels, or joints, according to circumstances. If in the head, inducing an unpleasant "stuffing up" and an interruption of the sense of smell, an immediate and grateful relief is experienced sometimes, by applying to the nose a bottle in which has been put a little cotton and a spoonful of spirits of hartshorn, and holding it there a moment; then remove, and re-apply as before. This is repeated several times in the course of a few minutes—the nostrils are freed, and the sense of smell restored.

About Coughs.—The lungs, in health, are always throwing out—manufacturing—a thin, mucilaginous-like liquid, near the color of the white of an egg, for the purpose of lubrication, so that they rise and fall at each breath with facility, without friction. This "mucus" is a part of the lungs, a part of their healthful product, and its presence causes no disturbance; but a common cold falling on the lungs, changes the color and consistence of this lubricating material, and it becomes yellow and thick; and this being unnatural, becomes at once a foreign body; nature grows uneasy, and sets up a cough to aid its ejection, as if it were a crumb of bread which had gone the wrong way. When a cough begins to dislodge this, it comes up in the shape of yellow matter; the cold is said to "break," and the person begins to get well. Whatever represses cough, as all cough drops, lozenges, and troches do, only keeps this yellow matter longer in the lungs—only protracts the cure—but if kept in too long, nature makes the attempt to get rid of it in another way, by re-absorbing the yellow matter and throwing it into the general circulation again,—evidenced by a red spot on one or both cheeks, called "hectic," at the same time night-sweats come on, and this is consumption in the last stages!

All coughs are soonest cured by promoting and increasing them; because nature endeavors by the cough to help bring up the phlegm and yellow matter which is in the lungs, as the lungs can not heal while that matter is there. And as it can not be got rid of without coughing, the more coughing there is, the sooner it is got rid of—the sooner the lungs cleared out for the fuller and freer reception of pure air, which is their natural food. The only remedies which can do any good in coughs are such as loosen the phlegm, and thus less cough is required to bring

it up. Those remedies are, warmth, out-door exercise, and any thing which slightly nauseates.

Cod-Liver Oil Rendered Tasteless.—Fifteen drops of chloroform added to a tablespoonful of cod-liver oil renders it agreeable to take, without in the least impairing its good qualities or interfering with its therapeutical value.

Another Method.—Sweeten vinegar with honey. Take a small sip, and then take the oil, the taste of which will be perfectly and pleasantly disguised.

OLD AGE: ITS CARE AND ITS DISEASES.

Threescore years and ten is now the general term of human existence, whatever it might have been in the times of Biblical history. With women the fifty-third, and with men the sixtieth year, may generally be considered the age at which they respectively begin to exhibit signs of infirmity and decrepitude. Diseases incidental to this stage of life then come into play, and their effect upon the habit and constitution are soon manifest. Especially do such hereditary diseases as gout, gravel, rheumatism, apoplexy, and paralysis, arise, to make a wreck of the constitution; and cancer, more particularly in women, commits its ravages, eating into the springs and sources of life, and destroying its victims with deadly certainty. Now it is that any excesses committed in the earlier periods of life, and habitual infringements of the laws of health, are found to have told upon the constitution, although this was not apparent in the full vigor of manhood. Now it is that we find impaired powers of respiration, and of secretion, and of digestion, rendering it necessary to be careful in the air we breathe, the exercise we take, and the food we eat. The latter should be light and nutritious, taken in small quantities, and at short intervals; if meat, and the teeth are defective, it should be minced before cooking, or cut up small afterwards.

There can be no doubt but that the more simply and naturally people live, the longer will be their stay in this world; and although contentment of mind, healthy occupation, and a salubrious residence are great essentials to longevity, the want of these advantages is greatly aggravated by intemperate living and a thoughtless disregard of the precautions necessary in every position in life.

Poverty is a great disturber of repose, and painful indeed is it where embarrassments beset the "old man," but the very idea of it should cause us to be thrifty while young. There is no other remedy, if we cannot help ourselves and have no friends to assist, than to bear up with all the philosophy we

can muster. It is but for a short time, and the period to all must arrive when there is no distinction or precedence.

Meals.—Sleep.—It is best for old people to take dinner early, and a light supper always, unless there is some peculiarity in the state of the health to render this unadvisable. Early to bed, but *not* early to rise, is the rule at this period of life; the aged require much sleep, or, at all events, much rest, for with them deep sleep is commonly of short duration, and the recumbent position affords all the rest they need; retired as they commonly are from the busy occupations of life, they know not the weariness which results from active exertion, either of the physical or mental powers. Narcotics should never be taken to produce sleep, unless the wakefulness be occasioned by some painful disease.

Exercise should be taken by old persons as long as their failing powers permit, but not be carried to the extent of great fatigue.

Warmth is essential to their comfort and health; they should be wrapped in flannel, and kept in an equable temperature; it has been noticed that on the setting-in of a frost, the number of old people who have died of apoplexy and paralysis has much increased.

Cleanliness, although often neglected by the aged, or those who have the care of them, is very necessary to the preservation of life; the body should be frequently sponged with tepid water, and afterwards rubbed with a rough towel; the feet should be often washed, and the face and hands kept perfectly clean.

Amusement is as necessary to the old as to the young, but it should be of a quiet, unexciting nature.

If unable to read themselves, they should be read to, and talked to, and listened to, for one of the greatest pleasures of old age consists of old memories and associations. Aged persons live very much in a world of the past, and if sometimes tediously garrulous, it should be remembered that from them this world, with its exciting hopes and depressing cares, is rapidly passing away; and that in the circle of life, with them nearly completed, the beginning and the end approach each other, until they finally join,—birth and death forming the uniting points.

Medical Treatment for Old Age.—Medicines for the old should be of a warm and somewhat stimulating nature; alkalines should be avoided, unless absolutely required for the counteraction of a tendency to acid in gout or gravel, and then

their action should be carefully watched, as a long continuance of them may probably create a greater evil than that which they are intended to obviate.

The blear eyes with which old persons are often affected, may be somewhat relieved by a collyrium of sulphate of zinc, about six grains in an ounce of distilled water,—the eyes to be damped occasionally with a piece of lint dipped in the liquid.

Aperients are often required by old people, but violent purgatives seldom; these last should be avoided as much as possible; also mercurials, except in very small doses; and neutral salts, which are of too cold and griping a nature. Compound infusion of senna, with a little tincture of ginger, gentian or cardamums, added to impart warmth, and relieve the tendency to flatulency so common at this period of life, may be safely given. About an ounce of the compound decoction of aloes is a good stomachic aperient; but if there is a tendency to piles, half an ounce of castor-oil, in a little gin and water, is good for those whose urinary organs require stimulating; the action of these should be carefully watched, and medical advice obtained on the slightest symptom of derangement, as the want of proper attention in time frequently entails consequences which render the after years those of misery and discomfort. Voiding the urine with old people is a work of time and difficulty; it should always be performed when the inclination arises, and never in a hurried and imperfect manner.

Five grains of the compound rhubarb pill, given at bedtime every night, or as often as required, is a good mild aperient for the aged, but it should be fresh and soft, as should all pills, or they will probably pass through the bowels unchanged. Oatmeal gruel, with figs or baked apples, will, of themselves, often prove sufficiently relaxing; if so, it is best to avoid aperient medicines altogether. For treatment of the diseases to which the aged are particularly liable, reference must be made to their several heads.

On Death.—Death, in its natural order, is not an evil. A state of endless life on earth, with our present organization, is as repugnant as the idea of total annihilation hereafter. A life perfect in all its stages is desirable, but few attain it. If men lived more true, useful and happy lives, longevity would be far more general.

Life is of value only as a means of improvement and happiness,—deprive it of these, and it is valueless. Those who live longest in reality are those who accomplish the most good.

The process of death is the reverse of the process of development. The generative functions fail first, the animal next, and the organic becomes impotent last. In the act of death, the animal life—that system of passion, thought and sensation—dies before the organic system. After the senses have lost their power to feel, and the brain has lost its consciousness, the chest expands, the heart beats, the muscles perform their motions as usual. What are termed the agonies of death are only the unconscious and painless struggles of the organic system,—in the midst of which the soul is triumphant, serene and happy; in its new-found freedom, it rejoices in a higher and brighter sphere of existence.

Natural death, which is the gradual decay of the system in old age, is as painless as any other healthy and natural function. It is not a proper cause of regret to the individual nor to his survivors. The calm death, which follows at the close of a long and well-spent life, is the most beautiful thing in our whole existence. We may weep over the dying couch of infancy; we may sorrow for those who are cut off in youth or manhood. This earthly life, to them, has been a failure. It has not answered its purpose. It has not been lived in its integrity. Even after a long life, we may regret that it has been less useful, or less happy than it should be. Amid the discordances of our present social state, there are everywhere infinite causes for regret; but even now, death is welcome to the aged,—joyfully welcome to all who know the uses of life, and have performed their allotted part; they can then—

> "Like ripe fruit drop
> Into our Mother's lap, or be with ease
> Gathered, not harshly plucked."

Disease Foreshadowed By Undoubted Signs.

The Countenance.—Tolerably clear indications of a person's state of health may generally be read in the expression of the countenance. Where there is great anxiety depicted on this dial-plate of the internal organs, there is likely to be functional or organic disease of the heart, pneumonia, bronchitis, laryngitis, croup, chronic consumption, dropsy of the chest, causing a sense of oppression and impeded respiration. In fevers, and other acute forms of disease which shorten life, there is also this anxious expression, as well as in melancholia, hypocondriasis, and to some extent in low forms of mania.

When the countenance is livid and tinged with blood, there is impeded respiration and circulation, and probably congestion of the brain; this is the case in apoplexy, disease of the heart, effusion of the lungs, etc. A pale countenance is a sign of fainting, of anæmia, and hemorrhage, external or internal. When the expression is violent and excited, there is probably the delirium of fever, inflammation of the brain, mania, or delirium tremens. In paralysis, convulsions, epilepsy, hysteria, and chorea, we have a distorted countenance; and a flushed one is symptomatic of fever in general, and of the early stage of delirium tremens. Sometimes, in the latter stage of an incurable disease, the face becomes what nurses call "struck with death," and to this hopeless corpse-like expression has been applied the term *Facies Hippocratica*, because it has been vividly pictured by Hippocrates himself. Here is his picture: "The forehead wrinkled and dry, the eye sunken, the nose pointed and bordered with a dark or violet circle; the temples sunken, hollow, and retired; the ears sticking up, the lips hanging down, the cheeks sunken, the chin wrinkled and hard, the color of the skin leaden or violet; the hair of the nose and eyelashes sprinkled with a yellowish white dust.

The Tongue.—With regard to the morbific appearances of the tongue, we may note that it is sometimes *loaded*, as it is

termed, the upper surface being covered with a layer of mucous substance, which may be scraped off with a tongue-scraper. This indicates a foul stomach. In severe cases of dyspepsia this coating often becomes very thick and peels off, leaving the tongue red, moist, and tender. Sometimes the coating is dark brown, resembling fibres, which admit of being separated by the fingers. It is then said to be *furred*, and this is symptomatic of great local irritation arising from inflammation. In feverish conditions of the system the tongue becomes very dry and hot, parched, as it is called; if clammy and viscid, there is usually derangement of the digestive functions; a yellow tinge on the coating ot the tongue indicates a biliary disorder; a thin creamy white, inflammatory disease in the abdomen. In sore throat, we often find it of a dingy whitish color; in scarlatina, we have elongated papillæ, presenting bright red spots; and in some forms of intestinal irritation and hemorrhage, it is morbidly clean and red. In anæmic patients we find this organ partaking of the general condition of the system, being pale and flaccid; in paralysis it is drawn on one side; in delirium tremens, and nervous affections, it is tremulous; and in low stages of fever it becomes almost black, and can not be protruded. Thus to the instructed eye the tongue affords a pretty sure indication of the state of the system, and is always consulted by physicians as a reliable authority.

The Fæces.—The fæces is the rejected residue of the food passed into the stomach after it has served the purposes of nutrition. According to Berzelius, the normal constituents of the human fæces are as follows:—

Water	73·3
Vegetable and Animal Remains	7·0
Bile	0·9
Albumen	0·9
Peculiar Extractive Matter	2·7
Salts	1·2
Slimy Matter, consisting of picromel, peculiar animal matter, and insoluble residue,	14·0
	100·0

This is the condition of the fæces when the health is perfect, and there is nothing very peculiar in the diet to render it otherwise. In diseases great changes take place, not only in the proportions, but even in the ingredients of which the fæces are composed. By their peculiarities of substance, smell, and color, the medical man is enabled in a great measure to judge of the nature and progress of the mischief going on within;

therefore it is of importance that they should be preserved for his inspection. The following are a few of their most obvious indications:—

Natural motions are of a ginger-bread color, slightly varying in tint and hue, and of tolerable solidity of consistency, although perfectly impressible. The smell is offensive, but has not that peculiar fœtidity which is observed in some diseased conditions of the system. The evacuations should be daily, and at or near a certain hour; but a deviation from this rule is no proof of ill health. We have known persons, in a perfectly healthy state, who only went to stool once in two, three, or four days, and even a week. It depends greatly upon habit, but such a habit is not good. Children should be taught to go at a certain hour every day, and the habit of a daily evacuation of the bowels once fixed, will probably remain through life, except when it is interfered with by sickness, or the failing powers which are often a consequence of old age.

Mucous evacuations have a semi-transparent, jelly-like appearance. They may be tinged with brown, green, or yellow, all indicating the presence of bile; or red with blood, when there is inflammation or congestion of the mucous membrane as in mucous diarrhœa and dysentery.

Lymphatic evacutions have a rough, shreddy, or spotty appearance. There may be little irregular round specks, like dirty white of egg, scattered through the fæces, or long pieces like shreds of lymph or dingy-colored parchment. In this case it is likely there may be acute inflammation of the mucous membrane of the intestines, the seat of which may be in any of the bowels, or merely the rectum. This, like the above, is a symptom of diarrhœa and dysentery.

Pus in the fæces indicates either ulceration of the bowels, or the breaking of an internal abscess into the alimentary passages. If there is much of it, the latter is most likely the case. This is a dangerous symptom.

Bile in the fæces indicates excessive action of the liver, the cause of which may be excessive irritation, or active congestion,—in which case the color is generally of a bright yellowish brown, but sometimes, especially in children, it is of a decided green color. This, too, is often the case with grown persons, when the liver is just recovering from a torpid state and beginning to act violently. This is commonly the case, too, in hydrocephalus, when the color is a peculiarly deep green. Bilious motions may or may not be loose, although they are generally so, from the bile acting as an irritant in the lining of the bowels.

Absence of bile in the fæces is shown by absence of color. The motions are clayey, sometimes as pale as pipeclay, and ranging from that shade up to the natural hue, occasionally assuming a grayish tint. They vary in substance, and when liquid are usually frothy, and float upon water on account of the quantity of gas which they contain.

Loose motions proceed from so many causes that we cannot take them as clear indications of any particular diseases. They are always present where there is an irritated or inflamed state of the mucous membrane, as a diarrhœa, in some stages of which they become altogether watery. If, when in this state, they exhibit rice-like particles, they indicate Asiatic cholera, or the too powerful action of saline or drastic purgatives.

Solid motions, when too much so, indicate constipation.

Offensive motions occur in dyspepsia, especially those forms of it which are associated with hypochondriasis. The fœtor is excessive in low fevers, when the poison introduced into the system seems to render the whole of the solids and fluids thereof peculiarly liable to decomposition.

Expectoration.—This is, first, the act of discharging mucous or other matter from the lungs or trachea; and second, the substances so discharged. The term in its first meaning is synonymous with coughing, and need not further occupy our attention; but in its second, we find so many important considerations connected with the diagnosis of disease, that we must pause awhile to consider it. It is by the nature of the expectoration that the physician is enabled to judge of the character and progress of the malady with which he has to contend. If this be *frothy*, it indicates active bronchitis, catarrh, or influenza; if *stringy*, and of a whitish or yellowish color, the bronchitis has become chronic, or spasmodic, or there may be hooping-cough present or impending; if *purulent*, it may indicate the latter stages of catarrh or influenza, especially if the sputa, or matter spat up, is mixed more or less with a tenacious mucus; genuine *pus*, capable of being poured from one vessel to another, indicates the bursting of a vomica on the lungs, or of the matter of the empyema having found its way into the bronchial passages; the yellow matter often expectorated in humeral asthma is not truly purulent, but to a large extent mucus. If *lumpy*, there can be no mistake as to the nature of the disease; pulmonary consumption has fairly set in, and made considerable advances; there is sure to be a softening and breaking up of tubercles, where there are small yellowish or whitish lumps expectorated along with the clearer fluid on which they float, per-

fectly distinct. If *membraneous*, the sputa indicates inflammatory action of a chronic, most likely of a croupy character. If *stringy* and *rusty-colored*, there is certainly pneumonia; if *bloody*, there is hemoptysis,—either a blood-vessel on the lungs has broken, or blood has oozed through the bronchial membrane, both of which are symptoms of a very diseased state of the tissues, and indicative of great danger to the patient. If *offensive* and *putrid*, there may be gangrene of the lungs, but this is only a single sign, and not to be relied on alone.

These are the chief distinctive characters which expectoration assumes, and its increase or decrease in bulk or density, its varieties of tint, and other particular changes, tell to the experienced eye of the doctor how the case progresses, and whether it is likely to terminate in convalescence or death.

The Temperaments.—In physiology temperament has been defined as a peculiar organization of the system common to several individuals, which to a certain extent influences the thoughts and actions. There is, besides, in each individual a further peculiarity of organization which serves to distinguish his temperment from that of another person, to whom, however, he may in other respects bear a great resemblance. This individual temperament is called *Idiosyncracy*.

Four temperaments were distinguished by the old physicians, founded on the notion of four qualities which entered into the constitution of man, and were supposed to *temper* each other, and influence the character, according as one or other prevailed over the rest. These qualities were, in the abstract —hot, cold, dry, moist; in the concrete—fire, air, earth, and water; and their highest point of development was—

1. The *Sanguine*, or *Sanguineous Temperament*, supposed to be characterized by a full habit, soft skin, ruddy complexion, blue eyes, red or auburn hair, frequent pulse, large veins, and vivid sensations.

2. The *Atrabilious*, or *Melancholic Temperament*, described as existing in a thinner but firmer frame than the preceding, with a dark complexion, black hair, and a slower circulation, a nervous system less easily moved, and a character grave and meditative.

3. The *Bilious*, or *Choleric Temperament*, intermediate between the two preceding, marked by black curling hair, dark eyes, a swarthy, and at the same time ruddy complexion; a thick, rough, hairy skin; and a strong, full pulse.

4. The *Phlegmatic*, or *Pituitous Temperament*. This differs from all the rest, in the laxity of the skin, the lighter color of

the hair, and the greater sluggishness of the faculties. Without keeping to the old theory, modern physiologists to a certain extent adopt these terms, to which they have added—

5. The *Nervous Temperament*, marked by a combination of some of the above characteristics, with a quick and brilliant intellect, and great susceptibility.

Not often do these temperaments occur in a pure form. We meet with the indications of two, or even three, of them mingled in one person,—whom, therefore, we must call nervous-sanguine, or nervous-bilious-sanguine, as the case may be.

Viewing temperament as a predisposing cause of disease, we may say that sanguine persons are more liable to acute inflammation than others; nervous, to mental disorders and affections of the nerves; phlegmatic, to scrofula; phlegmatico-sanguine, to gout; and bilious, to hypochondria, and disorders of the digestive organs.

Idiosyncracy.—In most individuals there are certain mental or bodily peculiarities, which we term *Idiosyncracies;* and these, to a certain extent, shape and fashion the life and mode of thought, and greatly influence the state of health. In reference to the latter subject, when we say that a man has a predisposition to gout or gravel, we allude to one of his idiosyncracies, and we speak of the gouty or other state of that man as his *Diathesis.* What are commonly called antipathies, are the peculiar result of states and conditions of the system, to which the above terms may be properly applied; and it is impossible to affix any assignable cause for these, nor can the medical man be aware of them until he has noticed them in their effects, or been fully informed of them by the patient or his friends.

To some persons a particular odor is perfectly unbearable; others can not abide a certain sound: the sight of an insect, or other animal not obnoxious to most people, will make this or that person ready to faint away, and fill the mind with a nameless dread. These are idiosyncracies, such as Shylock, in Shakspeare's tragedy of "The Merchant of Venice," alludes to—

> "Some men there are love not a gaping pig;
> Some that go mad if they behold a cat," etc.

Then there are those in whom certain medicines produce an extraordinary and altogether unusual affect. We have known a few grains of any mercurial preparation, which would have little or no effect upon systems generally, salivate a person; and food pleasant and wholesome to most, act like a poison.

THE COTTAGE PHYSICIAN

HOMŒOPATHIC

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This case of medicines is prepared expressly for patrons of "**The Cottage Physician,**" under the direction of the Author of the Homœopathic treatment, and contains 24 of the principal remedies used by the Author. The medicines are carefully prepared, correctly labeled and arranged in a case, made expressly for the purpose, and will be sent, prepaid, on receipt of $2.75.

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THE

HOMŒOPATHIC DEPARTMENT

—OF—

THE COTTAGE PHYSICIAN.

—BY—

J. H. CARMICHAEL, A. M., M. D.

NOTE.

On the next page will be found Dr. Carmichael's preface to his department of this work, which should be read carefully by every person seeking information from these pages. Very much depends upon the proper administration of Homœopathic remedies.

READ CAREFULLY.

PREFACE

TO THE HOMŒOPATHIC DEPARTMENT OF

THE COTTAGE PHYSICIAN.

In preparing the treatment to a domestic practice, the directions should be simple, yet full enough to be understood. This idea has been fully carried out, and nothing has been introduced but what has been verified by experience, and, therefore, will be fully reliable. Persons who cannot get a physician may depend upon the remedies given herein; but be sure that they cover a majority of the symptoms, which will be known by comparing the symptoms of the disease with those given under the remedy.

Homœopathic remedies are very active, when properly chosen, and will show beneficial results, generally, within a very few hours. In severe cases, with violent symptoms, they may be given as often as every five minutes; but at the least approach of improvement, lengthen the intervals. Ordinarily medicine given every hour is often enough, and many times every two or three hour intervals should be imposed, particularly with young children.

Homœopathic medicines are prepared in the form of liquids and powders. Pellets are used as a convenient vehicle, very useful to carry about in the pocket.

Of the attenuations, mentioned in this book, from six to eight drops should be added to one-half a glass of water, and of this teaspoonful doses may be given as often as seems necessary. The powders may be taken dry on the tongue, or as much as could be placed upon a ten cent coin put into one-half a glass of water, and administered as in case of the liquid. Four to six pellets are a dose. A child under two years of age to receive one-half the amount of an adult.

Very truly yours,

J. H. CARMICHAEL.

41 Maple Street, Springfield, Mass.

HOMŒOPATHIC TREATMENT.

———o———

The full diagnosis of each disease will be found in the preceding pages, arranged in alphabetical order, the pages being indicated by the small figures within the (parentheses).

———o———

Abscess. (95)—First stage, before pus has formed, give *Belladonna*, 3 x, and *Mercurious Viv*, 6 x, in alternation. When pus begins to form, give *Hepar Sulphuris*, 3 x.

Sulphur, cc, is useful to remove a tendency to abscesses. Poultice and open freely as soon as suppuration takes place. After opening, wash out the abscess with *Tinct. of Calendula*, one part to ten of water.

Abscess, of the Ear. (96)—It is so liable to extend to the brain that a surgeon should be called early. The same remedies as above.

Apoplexy. (97)—Give *Aconite*, 3 x, and send for medical assistance. Principle remedies are *Aconite*, 3 x, *Belladonna*, 3 x, *Opium*, 30, *Arnica*, 3 x, and *Glonoine*, 30.

Aconite, 3 x, hard wiry pulse; persons of full habit.

Bell., 3 x, congestion of the brain; red swollen face; throbbing of blood vessels; dilated pupils, convulsive movements of the face and limbs, serviceable early in the case.

Opium, 30, profound stupor; dusky countenance; contraction of pupils; convulsed; moans and groans; cannot be aroused.

Arnica, 3 x, after active excitement has subsided, to promote resorption of effusion.

Nux Vomica, 3 x, is a useful remedy to prevent a predisposition to apoplexy. The diet should be plain, avoiding rich food and stimulants. Exclude all excitement, over exertion, sudden changes of temperature, and excesses of all kinds.

Asthma. (100)—*Arsenicum*, 3 x, *Euphorbia-Pilulifora*, 1 x, *Ipecac*, 1 x, *Veratrum Viride*, 1 x.

Arsenicum, 3 x, hay-fever, watery excoriating discharges from the eyes and nose.

Euphorbia Pil., 1 x, suffocative cough; considered a specific by many.

Ipecac, 1 x. nausea and vomiting, followed by violent fits of coughing.

Veratrum Vir., 1 x, hard, difficult breathing; tight wheezing cough; full, hard, bounding pulse.

Back. (102)—Lameness (Lumbago.) *Rhus Tox*, 3 x, for painful condition of the muscles from a sprain or wrench.

For crick of the back, *Ferrum Phosphoricum*, 3 x.

Baldness. (102)—To prevent the hair from falling after fevers, etc., *Flouric Acid*, 6 x, and *Silicea*, 30.

Barber's Itch. (102)—*Sulphur Iodide*, 3 x, every six hours and apply Blue Ointment.

Bed Sores. (103)—Tincture Arnica and Brandy, equal parts, locally, for inflammation.

After sloughing out, give *Arsenicum*, 3 x, internally, and apply powdered *Boracic Acid*.

Bloody Urine. (103)—Variety of causes. Call your physician. As general remedies, *Terebinthina*, 1 x, and *Erigeoon Can.*, 1 x, Camphor ϕ, after a blister of Spanish Flies (*Cantharides*).

Bleeding from the Nose. (104)—(Epistaxis) *Aconite*, 1 x, for plethoric persons, with hard, quick, wiry pulse.

Carbo Veg., 3 x, severe nose-bleed, several times daily, with pale face before and after each attack.

Nitric Acid, 3 x, disposition to nose-bleed.

Bleeding from the Lungs. (105)—(Harmoptysis.) *Hamamelis* ϕ, ten drops, every hour, for dark blood which is profuse or scant.

Veratrum Vir., 1 x, congestion of the lungs, with full, hard, bounding pulse.

Phosphorus, 30, disposition to frequent hemorrhages with dry, hacking cough.

Acute Inflammation of the Bowels. (107)—(Enteritis.) *Aconite*, 1 x, quick, wiry pulse; dry, hot skin, and very restless. *Arsenicum*, 3 x, burning pain in bowels; tongue red and dry; yellow, frequent stools; vomiting; very weak and debilitated.

Colocynth, 2 x, violent, griping pain in the bowels.

Veratrum Alb., 1 x, cold sweat; cramps in legs, with vomiting and diarrhœa.

Keep hot packs of alcohol and water over the bowels and call a physician.

Avoid all animal food.

Chronic Inflammation of the Bowels. (107)—(Chronic Enteritis.) *Byronia*, 3 x, constant dryness of the lips, pain in the bowels; one day, diarrhœa, next day, constipation.

Iris Versicolar, 3 x, grumbling belly-ache; stools inclined to be loose; liver out of order.

Kali Bichromicum, 3 x, chronic inflammation all through the bowels from the stomach to the anus; mucous discharges which are stringy.

Lycopodium, 30, much wind in the bowels; inclined to constipation.

Plumbum Carb., 30, violent long-lasting pain in the bowels; chronic diarrhœa.

Sulphur, 200, constipation or diarrhœa—chronic and persistent, even after giving all kinds of remedies. A course of *Sulphur*, once or twice daily for a week, will bring the case under control.

Milk should be the principal article of diet. All *animal food* discarded, excepting, now and then, raw, grated beef.

Bronchitis. (108)—*Aconite*, 1 x, at commencement, with hot, dry skin and quick pulse.

Bryonia, 3 x, bronchial tubes feel sore; dry cough, also, at commencement, may be given alternate with Aconite.

Sambucus, 1 x, very useful for young children.

Verat. Vir., 1 x, full, bounding pulse; difficult breathing, also *Antimonium Tart.*, 3 x, *Kali Bichromicum*, 3 x, and *Ipecac*, 1 x.

Keep the chest wrapped in cotton batting.

Cancer. (110)—It should be removed, early, by an operation. Follow this up by *Arsenicum*, 3 x, six months, a dose two or three times daily.

Condurango, 1 x, is said to relieve the pain of cancer, anything short of *complete* removal, should not be tolerated.

Canker of the Mouth. (111)—*Merc. Cor.*, 3 x, one of the best remedies.

Catalepsy or Trance. (112)—(See *Hysteria.*)

Cataract. (113)—Must be removed by surgical means.

Cannabis Sativa, 3 x, said to have cured cases of cataract.

Catarrh. (114)—*Aconite*, 3 x, acute catarrh, feverishness; pain in the head, eyes, nose, etc.

Bryonia, 3 x, in addition to the acute catarrh of the nose, it has a dry cough with stitches in the chest.

Kali Hydroidicum, 3 x, sneezing; watery discharges from the eyes and nose which excoriates; pain in the fore part of the head.

Chronic Catarrh. (115)—*Calc. Carb.*, 30, *Kali Bichromicum*, 3 x, *Sanguinaria*, 3 x, *Sulphur*, cc.

Chapped or Cracked Lips. (116)—*Bryonia*, 3 x, dry, chapped lips.

Chilblains. (116)—*Agaricus Muse*, 3 x, will cure chilblains in a few days.

Chicken Pox. (117) (Varicella.)—*Aconite*, 3 x, fever; restlessness, generally all the remedy needed.

Antimony Tart., 3 x, if the eruption suppurates, this remedy will be useful to prevent scars.

Hepar Sulphur, 3 x, useful for a week or so after any of the eruption diseases.

Milk diet the best.

Asiatic Cholera. (118)—*Camphor* ϕ, great depression; collapse; chilly most of the time; violent vomiting and purging, give early in the disease.

Arsenicum, 3 x, excoriating discharges; bright red tongue, with burning of stomach and bowels; patient wild and restless, useful in all stages of the disease.

Veratrum Alb., 1 x, cold sweat; violent vomiting and purging; cramps of different muscles of the body.

Cuprum Aceticum, 30, also for cramps with empty retching: also to be used as a prophylactic.

The diet should be milk with a little brandy added.

Cholera Morbus. (120)—Same remedies as Asiatic cholera, adding *Colocynth*, 2 x, for violent, griping pain in the bowels.

Colic. (Pain in the abdomen.)—*Colocynth*, 2 x, the first remedy usually thought of, griping, tearing, twisting pain in the bowels; much gas in bowels.

For **Painter's** Colic. (122)—Opium must be administered in one grain doses, every two hours, until better.

Kali Hydroidicum, 1 x, useful to eradicate the lead from the system.

Concussion of the Brain. (124)—Keep the patient quiet; apply cold cloths to the head and give *Arnica*, 3 x, every hour or two, for a few days.

Congestion of the Brain. (125)—*Belladonna*, 1 x, full, beating blood vessels; full pulse; red, flushed face; mild delirium; dilated pupils.

Bromide of Potash, five grains, every hour, to an adult, until better.

Veratrum Vir., 1 x, full, bounding pulse; nausea with terrible pain in the head.

Convulsions. (126) (Fits.)—*Belladonna*, 3 x, flushed face; throbbing of the blood vessels going to the head.

Cicuta Virosa, 6 x, twitching and jerking of the muscles all over the body; movement of the muscles about the mouth causing a chewing motion.

Gelseminum, 1 x, violent fever; full, compressible pulse. The whole body is convulsed.

Hysterical Convulsions. *Nux Vomica*, 3 x, violent drawing backward of the head, and feet toward each other.

Convulsions from passion, *Chamomilla*, 30: injury, *Hypericum*, 1 x: worms, *Cina*, 3 x, *Cicuta*, 6 x: fright, *Ignatia*, 30.

Consumption. (128) (Phthisis.)—One-fifth of the population die of this disease. The only safeguard against the disease is to keep one's weight up to a normal standard. This is to be accomplished by any and all means.

The *Compound Syrup of Hypophosphites* is one of the best remedies to accomplish this. The remedies are mostly *Bryonia*, 3 x, *Calc. Carb.*, 30, *Phos.*, 30, *Pulsatilla*, 3 x, *Sulphur*, 30. (See Cough, for indications.)

Costiveness. (131) (Constipation.)—*Nux Vomica*, 3 x or 30, useful after using much cathartic medicine; persons of sedentary habits, no desire for stool, and if there is, it cannot be accomplished.

Plumbum, 30, stools of hard, small balls, frequent attacks of colic.

Sulphur, cc, remedies do not give desired effect; piles, with burning pain in the rectum.

Drink a glass of oatmeal water, every morning, on rising.

Cornea, Ulceration of. (133)—*Merc. Cor.*, 3 x, and *Hepar Sulph.*, 3 x.

Employ an oculist.

Corpulence. (133)—A dose of *Nux Vomica*, 3 x, at night, is a good remedy.

Cough. (134)—*Aconite*, 1 x, croupy cough; spasmodic cough.

Bryonia, 3 x, hard, dry cough, with pain in head and chest.

Belladonna, short, dry, hollow, convulsive cough, worse at night; flushed face and cerebral congestion.

Hepar Sulph., 3 x, irritating cough; hoarseness, excited by exposure to cold. Rattling of mucous in the throat; croup.

Kali Bichro., 3 x, cough, with tough, stringy expectoration.

Phosphorus, 30, dry cough with tickling in the throat. Worse from talking or reading aloud.

Spongia, 1 x, dry, hoarse, croupy cough, with pain in the larynx. Alternate with *Aconite*, in croup, every fifteen minutes.

Castanea Vesica, 1 x, five drops, every two hours, in whooping-cough.

Cuprum Aceticum, 30, also useful in whooping-cough so violent as to often throw the patient into convulsions. (See also Asthma.)

Cramp. (135)—*Cuprum Aceticum*, 30, a very useful remedy.

Cramp or Spasm of the Stomach. (135) (Gastralgia.)—*Dioscorea*, 1 x, five drops every fifteen minutes.

Nux Vom., 3 x, and even ϕ, five drops, three times daily, will generally cure the disposition to cramp of the stomach.

Bryonia, 3 x, useful if the cramp comes on immediately after eating.

Lactopeptine, ten grains after each meal.

Deafness, (136) from catarrh, of the middle ear, most often cured by *Pulsatilla*, 3 x.

If from ear-wax, a few drops of Glycerine dropped in the ear, on going to bed, for a few times.

Defective Appetite. (136)—*Bryonia*, 3 x, if caused by a torpid liver, also *China*, 6 x.

Nux Vom., 1 x, from anxiety; overworked nervous systems and constipation.

Apply to a physician to ascertain cause.

Delirium Tremens. (137)—*Hyoscamus Nig.*, 1 x, ten drops every half hour until better.

Nux Vom., 1 x, five drops every three hours for three or four days, following the abnormal illusions. Keep the patient under close observation and send at once for a physician.

Diabetes. (138)—*Uva Ursa*, 1 x, ten drops every three hours in *Diabetes Insipidus*.

Diabetes Mellitus. *Arsenicum*, 3 x, very hungry and thirsty; pale skin; loss of strength; dryness of mouth and throat; excessive urination; watery diarrhœa.

Phosphoric Acid, 1 x, loss of nerve force, with frequent urination.

Diet must be free from starch and sugar. Exclusive milk diet often benefits. Gluten bread must be substituted for that of wheat flour. Avoid vegetables, arrow-root, asparagus, bread, biscuit, beans, beets, crackers, carrots, macaroni, oat-meal, pastry, potatoes, peas, rice, sago, sugar, tapioca, vermicelli; fruit, apples, grapes, pears, bananas, peaches, plums, pine-apples, raspberries and other sweet fruits; beverages, wine, beer, brandy, also cider and all alcoholic and sweet drinks.

Allowable vegetables, artichokes, cabbage, celery, cresses, cucumbers, olives, greens, lettuce, pickles, mushrooms; fruits, lemons, sour cherries, currants, gooseberries, strawberries and acid fruits, generally; meats, beef, mutton, poultry, game, fish, oysters, cheese, eggs, etc.

Gratify the thirst by an abundance of good water or skim-milk. The diabetic should be warmly clad.

Diarrhœa. (139)—*Camphor* ϕ, sudden diarrhœa with chilliness.

Dulcamara, 3 x, diarrhœa caused from getting wet; worse at night; bilious stools.

China, 1 x, painless, summer diarrhœa.

Chamomilla, 30, diarrhœa in children, accompanying teething.

Arsenicum, 3 x, chronic diarrhœa; red, burning tongue; vomits—even a small amount of water, in fact, everything taken into the stomach.

Ipecac, 1 x, diarrhœa and dysentery accompanied by much nausea.

Veratrum Alb., 1 x, vomiting and diarrhœa attended with cold sweating; cholera morbus; cholera infantum.

Avoid all animal food during an attack of diarrhœa. A little brandy may be added to milk with benefit.

Dilation of the Heart. (142)—*Digitaline*, 3 x, will strengthen a weak heart.

Phosphorus, 3 x, valuable as a tonic, giving tone to the system.

Diphtheria. (142)—Call your physician. *Apis Mel.*, 3 x, in diphtheria with much swelling of the throat, internally, and a stinging pain.

Phytolacca Dec., 1 x, violent fever, with much stiffness of the neck, early in the disease.

Mercurious Cor., 3 x, much swelling of the throat externally; the membrane is very offensive.

Kali Bichromicum, 3 x, croupous diphtheria, with tough, stringy mucous.

In connection with the *Kali Bich.*, 3 x, use a spray of a *solution of Chloride of Lime* and hot water: one part of the solution to ten parts of hot water. Use a steam atomizer.

Diphtheria is easily controlled by proper treatment, but exceedingly fatal when mismanaged. Feed the patient well on beef-steak, eggs, milk, etc. Stimulants and beef-tea of very little account. Never swab the throat, but use gargles of alcohol and water.

Dizziness. (144) (Vertigo.)—*Digitaline*, 3 x, for dizziness caused by an enfeebled heart which has produced anema of the brain.

China, 1 x, caused by loss of blood or severe diarrhœa.

Many other remedies are indicated from special causes which can only be located by a physician.

Dropsy. (145)—*Arsenicum*, 3 x, a very useful remedy in dropsy with much debility; red tongue and much thirst for cold water, but a small amount satisfies.

Digitaline, 3 x, heart dropsy, more particularly, but useful in any kind, from whatever cause.

Helleborus Nig., 3 x, dropsy of the brain; after scarlatina, etc. Skim-milk diet useful in dropsy from kidney disease.

Dysentery. (147)—*Aconite*, 1 x, very feverish; quick, wiry pulse at the commencement of the trouble; if the discharges are principally of blood, alternate with *Merc. Cor.*, 3 x, every half hour.

Ipecac, 1 x, nausea and vomiting, with bloody, greenish stools; it also quiets tenesmus.

Arnica, 3 x, dysentery, attended by much urging to go to stool. Injections of very hot water, after each stool, will relieve. Avoid all animal food; cold milk best article of diet.

Dyspepsia (151) (Indigestion.)—*Arsenicum*, 3 x, caused by ice-cream; burning in stomach; red tongue; thirst; the least swallow of food or drink causes pain.

Bryonia, 3 x, sense of pressure as from a hard lump in the stomach; bitter taste with headache.

Carbo Veg., 3 x, much gas in stomach.

Hydrastis, 1 x, for pain coming in two or three hours after meals.

Lactopeptine, five to ten grains after each meal, is useful to help the stomach until it regains its functions. Eat slowly, masticating the food thoroughly. Avoid such articles of food as are known to disagree.

Ear-ache. (153) (Otalgia.)—*Aconite*, 1 x, from cold; patient very restless.

Puls., 3 x, steady pain, but does not drive the patient about as Aconite does.

Aconite, ϕ, two or three drops on cotton, in the ear, very useful. Tobacco smoke, blown into the ear, will quiet the pain.

Enlargement of the Uvala. (154) which is relaxed, *Hyoscamus*, 1 x, every two hours. A tea of Gold-thread useful as a gargle.

Epilepsy. (155) (Falling Fits.)—To ward off an attack use *Nitrate of Amyl*, by inhalation.

Bell., 3 x, holds a high place in chronic epilepsy of young and full blooded subjects.

Cuprum Acet., 30, violent convulsions; pale face.

Nux Vom., 3 x, useful as a tonic to the nervous system.

Erysipelas. (158)—*Aconite*, 1 x, erysipelas of the face, with a quick, wiry pulse.

Belladonna, 3 x, intense redness of the skin; high fever; smooth surface; violent headache; delirium.

Rhus Tox, 3 x, vesicular, purplish colored skin. Powder with dry starch or flour.

In the phlegmonous variety, call a physician.

Exhaustion. (161)—If caused by hamorrhage, diarrhœa, etc., nothing is better than *China*, 1 x. If from non-assimilation of food, give *Calc. Phos.*, 3 x.

Arsenicum, 3 x, useful for indigestion, with burning of the stomach, also from the effects of typhoid fever.

Phosphoric Acid, 1 x, nervous exhaustion from excesses. Beef-tea is useful; use also milk.

Eyes. (162)—For simple inflammation of the eyes, the white of the eye being red, give *Bell.*, 3 x, every two hours. For hot, scalding, watery discharge from the eyes, *Kali Hydroidicum*, 3 x. A cinder or any foreign body in the eye should be early removed. Any trouble causing severe pain in the eye is serious, and an oculist or good surgeon should be consulted.

Fainting. (162) (Syncope.)—*Aconite*, 30, the best remedy to prevent its frequent occurrence. *Aqua Ammonia* or *Spirits of Camphor*, by inhalation, are restoratives; also sprinkling water in the face.

Prolapse of the Rectum. (163)—*Nux Vom.*, 3 x, three times daily, will help it, also *Podophyllum*, 3 x, in the same way. It is often necessary to wear an instrument for a time. Go to a surgeon.

Felons. (164)—*Belladonna*, 3 x, for redness of the finger, with throbbing pains after suppuration has taken place. *Hepar Sulph.*, 3 x, will hasten a cure. Have it opened, early; by so doing you will save much suffering, and, possibly, the loss of a finger.

Fevers, in general. (164)—*Aconite*, 1 x, give the remedy when you find a quick, firm, hard, wiry pulse.

Baptisia Tinct., 1 x, give this for a quick, fine, soft, compressible pulse; typhoid fever; diarrhœa etc.

Gelseminum, 1 x, give for a full, bounding pulse, that is compressible and does not resist the finger.

Veratrum Vir., 1 x, full, hard, incompressible pulse and resists the finger.

Fever and Ague. (165) (Intermittent or Malaria.)—*China, Quinine*, in recent ague, never in chronic cases, all the stages are well marked, the chill is usually in the morning from nine to ten.

Arsenicum, 3 x, chronic ague; one stage runs into another, often one stage is left out; very thirsty; rapid and excessive prostration; dropsical swellings.

Eupatorium Perf., 1 x, thirsty several hours before a chill and continues through it; short chilly stage; long hot stage and slight sweating.

Phos. Acid, 1 x, very profuse sweat.

Gels., 1 x, severe nervous symptoms.

Natrum Mur., 30, chronic ague. *Arsenicum*, 30, *Ipecac*, 3 x, *Cedron*, 3 x, *Sulph.*, 30, for dumb ague.

Bilious or Remittent Fever. (167)—*Gelseminum*, 1 x, the leading remedy for remittent fever; pain in the head on the left side.

Bryonia, pain on the right side of the head, extending to its base; yellow coated tongue; sallow complexion; constipation or alternate constipation and diarrhœa.

Merc. Protoide, 3 x, jaundice during the fever.

Phosphorus, 3 x, may be given if there is a cough at the same time of the jaundice.

Simple Inflammatory Fever (167) rarely requires anything more than *Acon.*, 3 x.

Slow or Nervous Fever. (168)

Bryonia, 3 x, yellow coating on tongue; constipation; pain in the right side of the head; lips dry and cracked.

Nitric Acid, 3 x, torpid, sluggish liver; sallow complexion; acid or bitter taste in the mouth, when the fever has continued thirty or thirty-five days without recovery.

Hyoscamus Nig., 1 x, for sleeplessness during nervous fever. Bathe the patient with a solution of Bicarbonate of Soda and hot water, once daily.

Typhus Fever. (169) (Ship Fever.)—See Typhoid Fever.

Typhoid Fever. (171.)—*Baptisia,* 1 x, alternating with *Gelseminum,* 1 x, will abort a Typhoid Fever, if given soon enough.

Bry., 3 x, violent headache; restless sleep; tongue coated yellow, with dry, parched lips; great thirst for large quantities of water. Should not be used after diarrhœa sets in.

Mercurius, 3 x. Tongue loaded with a thick, moist, creamy coating; painful sensibility of the whole abdomen; bloody stools; sweating without relief.

Rhus Tox., 3 x. Temperature high; tongue dry; dark coating on tongue and teeth; delirium; headache; nose bleed; debility and prostration; pulse weak and slow; abdomen bloated; frequent diarrhœa.

Arsenicum, 3 x, hot, dry skin; thirst; red tongue; yellow diarrhœa; great prostration; face pale and shrunken; falling of the lower jaw; bed sores; picking at the bed clothes; distended abdomen; will restore a patient, oft times, when considered beyond help.

Muriatic Acid, 1 x, extreme prostration; patient stupid and unconscious; sliding down in bed; low, muttering delirium; inability to protrude the tongue; depression of the lower jaw; turning up of the eyes; involuntary stool and urine,

Hyoscamus, 1 x, violent headache; delirium; wild, and tries to uncover himself and get out of bed.

Give all the milk the patient can drink. Beef-tea is admissable unless there be diarrhœa. No solid food can be allowed. Raw oysters may be taken, also ice-cream.

Yellow Fever. (171)—*Camphor* ϕ, violent chills, with prostration.

Acon., 1 x, fever, burning heat, with quick, wiry pulse; restlessness and great anxiety.

Bell., 3 x, congestion of the brain; throbbing of the blood vessels in the neck; red face; red eyes, which are sparkling; delirium; pain in the stomach, with nausea and vomiting.

Bryonia, 3 x, splitting headache; eyes red; tongue coated yellow; parched lips; great irritability and vomiting.

Argentum Nit., 4 x, dark colored vomiting, caused by hamorrhage from the mucous membranes of the stomach.

Arsenicum, 3 x, face yellowish and livid; eyes dull and sunken; lips and tongue brown or black; burning pain in the stomach; suppression of urine; short, anxious breathing; pulse small and tremulous; cold, clammy perspiration; great prostration and black vomiting.

Hyoscamus, 1 x, *Veratrum Alb.*, 1 x, *Crotalus*, 30, *Cantharides*, 3 x, and *Ipecac*, 1 x, may also be called for.

The diet should consist of milk, beef-tea etc., as in typhoid fever. Isolate the patient, and use disinfectants freely.

Fistula, Rectal. (172)—Go to a good surgeon. *Silicea*, 30, and *Hepar Sulph.*, 3 x, will assist in the healing.

Fœtid Breath. (172)—*Salicylic Acid*, 3 x, a powder, three times daily, will correct it, when the stomach is at fault. Decayed teeth should be filled or removed.

Gall Stones. (173)—Where a person is known to suffer from these concretions, give six tablespoonfuls of *Olive Oil*, at bed-time, repeated in two days, at the same time give *China*, 6 x, a dose three times daily, and it will rarely fail to cure. An anæsthetic will give the only relief while they are passing through the gall duct.

Gangrene, Mortification. (174)—Remove it when possible by amputation, if it be of a limb, from injury. A superficial slough can be treated by a flax-seed meal poultice, to which add charcoal. A poultice made from crushed, boiled carrots, is also a good one.

Internally, give *Arsenicum*, 3 x, every two hours, if there is much burning about the slough.

Secale, 3 x, for dry gangrene of the toes. A weak solution of Carbolic Acid, ten drops to one pint of hot water, should be used as a wash.

Glandula Swellings. (175)—When as a result of diphtheria, put on salt pork, and give *Merc. Protoide*, 3 x, internally. When from a cold, *Hepar Sulph.*, 3 x, is generally the remedy. If from scrofula, *Calc. Phos.* 3 x, and *Calc. Iodide*, 3 x, are the best remedies.

Gonorrhœa. (175)—*Bell.*, 3 x, if there is much swelling of the parts, and at the same time use it by injection. Later on when the dis-

charge is thick and creamy, give *Canabis Sativa*, 3 x, every three hours and use a solution of *Calendula* and water one tenth.

Sulphur, cc, may be needed to cure the case.

Camphor is very useful for painful night erections.

Cantharis, 3 x, if the bladder becomes involved.

Avoid highly spiced food, liquors and cigars.

Gout. (182)—The leading remedy is *Colchicum*, 1 x, five drops every three hours; avoid highly seasoned and animal food, liquors of all kinds.

Gum Boil. (183)—*Bell.*, 1 x, will often remove the inflammation that leads to a gum boil.

Merc. Viv., 3 x, when caused by a decayed tooth.

Open as soon as pus forms.

Falling off the Hair. (183)—*Silicea*, 30, will stop the hair from falling off after a severe sickness, which has caused debility. At the same time a wash of Bay Rum and water, two ounces of each and Aqua Ammonia, one drachm, will be found useful.

Hay Fever. (184) (Asthma.)—*Arsenicum*, 30, is the chief remedy. *Sanguinaria Nitrate*, 3 x, will often help when there is severe sneezing and a watery condition of the eyes.

Headache. (184)—Bilious or sick headache will call for *Iris Vers.*, 3 x, or *Cóculus*, 30, at the time of the pain, taking *China*, 30, or *Nux Vom.*, 3 x, twice a day at other times. *Congestive* headache requires *Bell.*, 3 x, if without vomiting; if with vomiting, *Veratrum Vir.*, 1 x, at the time. During the interval, taking *Sanguinaria*, 30, or *Pulsatilla*, 30.

Rheumatic Headache (187) calls for *Bry.*, 3 x, if worse by moving about and better at rest, but if better moving about and worse at rest, *Rhus Tox.*, 3 x.

Salicine, five grains every two hours, may be given with one of the other remedies.

Periodic Headache (187) (Malarial.) may require *Quinine* to break it up: one dose of five, ten or fifteen grains, the night before an expected attack, followed by *Ars.*, 30, once daily for a month or so. At the time of pain no remedy can equal *Gelseminum*, 1 x.

Headache from a diseased condition of the brain will require *Zinc Phos.*, 3 x, and sedatives prescribed by a physician.

Headache of young persons of sedentary habits, free indulgers at the table, can be promptly helped by *Nux Vom.*, 3 x, one dose daily, at bed time. Nearly all forms are curable by homœopathic treatment.

Diseases of the Heart. (187)—Inflammatory diseases require *Acon.*, 1 x, for fever; quick wiry pulse; pain and anguish, and with this may be alternated *Bry.*, 3 x, if caused by rheumatic poison.

Arsenicum, 30, burning pain, with effusion in the sack; suffocative attacks; coldness of the surface; anxious and fears death.

Cactus, 2 x, a feeling in the heart as though grasped by an iron hand.

Veratrum Vir., 1 x, strong, loud beat of the heart, with difficult breathing; bronchitis.

For **Palpitation.** (188)—*Mochus*, 3 x, to quiet an attack.

Agaricus, 3 x, if due from excessive use of tobacco.

China, 3 x, if from tea drinking.

Neuralgia of the Heart. (188) (Augina Pectoris.)—Inhalation of *Amyl Nitrate*, to stop the spasm, *Arsenicum*, 3 x, three times a day.

Hiccough. (189) (Spasm of the Diaphragm.)—A few drops of vinegar on sugar will generally control it. *Mochus*, 3 x, is the homœopathic remedy. If occurring during the course of a severe illness, a tight bandage across the chest oftentimes prevents its reappearance.

Hip Joint Disease. (189) (Coxalgia.)—*Bell*, 3 x, when there is soreness about the joint discovered by pressure.

Calc. Carb., 30, twice daily; should be given steadily to correct the strumous condition.

Calc. Iod., 3 x, and *Calc. Phos.*, 3 x, for the same condition.

If from an injury, *Arnica*, 3 x, may be the most useful remedy. The joint should be placed at rest by patent splints, and the child placed under the care of a reputable surgeon.

Hoarseness. (190)—*Causticum*, 30, from singing and over-use of the voice.

Spongia, 3 x, or *Kali Bich.*, 3 x, when caused by croup.

Phos., 30, from the effects of a cold, always worse in the evening.

Hydrophobia. (190) (Rabies.)—The paroxysms must be controlled by anæsthetics, the patient placed in a straight jacket, so that he cannot injure himself or others. Medication has little effect.

Hypochondria. (191) (See Hysteria.)—*Nux Vom.*, 3 x, the most useful remedy.

Incontinence of Urine. (193)—*Cina*, 30, if the child is troubled with worms.

Equisetum Hyemale, 1 x, where the child has been in the habit of wetting the bed every night. Give a small amount of liquid food to the child at supper time.

Digitaline, 3 x, is often useful in old people.

Inflammation of the Liver. (194)—*Acon.*, 1 x, pain in the reigon of the liver, with high fever; quick, wiry pulse; restlessness.

Bryonia, 3 x, pain in the liver, worse upon movement; nausea and vomiting; yellow coating on tongue.

China, 6 x, one of the most frequent remedies called for in congestion of the liver.

Podophyllum, 1 x, chronic diarrhœa, worse in the morning, caused by an inactive liver.

Merc. Prot., 3 x, jaundice; yellow coated tongue; nausea, and often vomiting.

Phosphorus, 3 x, loathing of food, which, if swallowed, creates disturbances and is vomited after a few minutes.

Inflammation of the Spleen. (195)—*Quinine*, 1 x, is the only remedy usually called for.

Inflammation of the Stomach. (195) (Gastritis.)—*Arsenicum*, 3 x or 30, inflammation of the mucous membrane of the stomach, known by violently red tongue; burning pain in the stomach, and vomiting as quickly as any food enters the stomach.

Argentum Nit., 3 x, inflammation of the stomach, caused by ulcer of the stomach. Much gas in the stomach, with violent pain after eating. The diet should be of the simplest; milk, or milk and lime water.

Inflammation of the Kidneys. (195)—*Acon.*, 1 x, feverish; quick, wiry pulse; restlessness. *Turpentine*, 1 x, high colored urine, scanty, sometimes bloody. Pain over reigon of the kidney.

Aconite, 1 x, alternating with *Turpentine*, 1 x, are generally all that are called for in acute inflammation of the kidneys.

Inflammation of the Bladder. (196) (Cystitis.)—*Aconite*, 1 x, acute pain, with fever, alternating with *Cantharides*, 3 x, which has constant or frequent desire to urinate, followed by severe pain.

Apis Mel., 3 x, stinging pain, when passing water, in the bladder. If the inflammation is caused by Spanish-fly blister, with severe strangery, give *Camphor* ϕ, ten drops, every quarter hour, until better. Hot applications over the lower part of the abdomen should be made.

Inflammation of the Peritoneum. (197) (Peritonitis.)—A very dangerous disease; call your physician early.

Aconite, 1 x, from cold febrile symptoms with quick, firm pulse.

Veratrum Vir., 1 x, full, hard, bounding pulse; vomiting and often diarrhœa.

Belladonna, 3 x, sharp, cutting pains in the bowels, which come quickly, and dissappear as rapidly as they come.

Bry., 3 x, second stage, exudation; pain in the bowels, aggravated from motion; tongue coated and dry; great thirst.

Colocynth, 2 x, severe, griping pain in the bowels. *Ars.*, 3 x, sudden sinking and prostration; restlessness; great thirst; tongue red. Keep the patient at rest, and use hot fomentations over the bowels.

For intense thirst and vomiting, small bits of ice are useful.

Inflammation of the Eye. (198) (Opthalmia.)—*Acon.*, 1 x, from cold; feverishness.

Bell., 3 x, acute redness of the conjunctiva or white of the eye. Keep hot compress on the eye, to which may be added *Bell.* ϕ, ten drops to a teacupful of hot water; compress to be wet in this solution. Use no eye washes. If not better in a few days, call your physician, for if the deeper tissues are affected, you cannot diagnose it.

Inflammation of the Larynx. (199) (Laryngitis.)—*Aconite*, 1 x, for fever with croupy cough; restlessness.

Kali Bich., 3 x, if the Aconite does not succeed, this remedy generally will. Its use will be needed if there is an expectoration of stringy mucous. This is the remedy, *par excellence*, for membranous croup.

Spongia, 1 x, may be given alternately with Aconite at first.

Hepar Sulph., 3 x, a powder every four hours, very useful when the violence of the attack has subsided, leaving a rough, hoarse cough.

Tracheotomy may be called for where there is fear of suffocation; but when homœopathic remedies are given this is rarely essential. The steam atomizer may be called for also.

Inflammation of the Tonsils. (199) (Tonsilitis, Quinsy.) *Bell.*, 1 x, the first remedy thought of in quinsy. It may be followed by *Merc. Prot.*, 3 x, if the inflammation does not subside in forty-eight hours. Should the tonsil suppurate, give *Hepar Sulph.*, 3 x. Gargle the throat with hot water frequently.

Inflammation of the Ear. (200) (Otitis.)—*Acon.*, 1 x, fever caused by cold. *Puls.*, 3 x, alternately with the *Acon.*

Hepar Sulph., 3 x, should an abscess develop.

Inflammation of the Tongue. (201) (Glossitis.)—*Bell.* 1 x, painful swelling of the tongue.

This should be followed in forty-eight hours by *Merc. Viv.*, 3 x, if not better.

Inflamed or Ulcerated Nose. (201)—*Kali Hyd.*, 3 x, the only remedy usually called for.

Inflammatory Blush. (201) (Erythema.)—*Bell.*, 3 x, all the remedy required generally.

Itch. (203) (Scabies.)—*Sulphur Ointment*, externally, use a week, every night on going to bed, at the same time take *Sulphur*, cc, internally.

Irritation of the Skin, Itching. (203) (Prurigo.)—It may call for a variety of remedies. *Rhus Tox.*, if it is a burning itching, worse in bed.

Urtica Urens, 3 x, stinging, burning itching, which comes and goes frequently; nettle rash.

Arsenicum, 3 x, chronic itching of the skin, which is scabby and dry. See a physician.

Influenza. (204)—*Aconite*, 1 x, alternating with *Eupatorium Perfolatum*, 3 x, for lameness and stiffness of all the muscles, joints, etc.

Bry., 3 x, will be called for later, where there is pain in the head; dry cough and pain in the chest.

Bell., 3 x, violent headache; red face; sore throat; redness of the eyes, etc.

Insanity. (205)—A terrible disease, and you cannot trifle with it.

Hyoscamus, 1 x, should be given frequently, until a physician is called. About fifty per cent. of cases are cured under homœopathic treatment. *Bell.*, 3 x, *Stramonium*, 3 x, *Cannabis Indica*, 3 x, *Cimicifuga*, 3 x, and many others may be called for.

Irritation of the Spine. (207)—Unless the result of an injury, is generally complicated by some uterine disorder.

Gels., 1 x, very useful where the patient is extremely nervous and sleepless; full pulse.

Nux Vom., 3 x, stiffness and rigidity of the spine; indigestion; constipation; pain in the back of the head and neck. Dry cupping and wet compresses to the spine are often most useful. Go to your physician and find the cause, and treat it from that point.

Irritation of the Bladder. (207)—Most frequent in women who have uterine displacements, and congestion of the neck of the womb. This should be corrected before any remedy will help, then give *Canth.*, 3 x, for frequent calls to urinate.

Sepia, 30, pain after urinating, with uterine congestion. Hot vaginal injections very good.

Jaundice. (207)—*Aconite*, 1 x, feverish and restless.

Bry., 3 x, congestion of the liver; yellow, thick coated tongue; thirst and headache.

China, 6 x, result of gall stones, or a thickened condition of the bile; obstruction of the gall duct, very useful in malarious climates.

Phos., 3 x, indigestion; vomiting of food about ten minutes after it is taken.

Merc., 3 x, and *Pod.*, 1 x, may be called for later, if the trouble does not respond to the other remedies. Jaundice is generally caused by some organic disease of the liver.

Lice. (208)—Apply oil of Bergamont to the scalp.

Lumbago. (209)—*Rhus Tox.*, 3 x, if from getting wet or a strain.

Galvanism is very successful and should be used where the disease persists any length of time, and applied by an educated physician, and not by the usual "electric doctor."

Lock-Jaw. (210) (Tetanus.)—The result generally of an injury to a nerve. The wound should be opened, and if the nerve can be found it should be divided.

Gels., ϕ and *Veratrum Vir.*, ϕ, sixty drops of each added to two glasses each half full of water, and giving a teaspoonful every quarter hour, has relaxed the muscles and cured many cases. The disease is fatal in a large per cent. of cases.

Masturbation. (211) (Onanism.)—A moral lecture often the best remedy. Allow some judicious and proper person to sleep with the offender.

Bromide of Camphor, 1 x, said to overcome the desire.

Phosphoric Acid, 1 x, used to overcome the ill effects.

Mumps. (214) (Parotitis.)—*Acon.*, 1 x, *Puls.*, 3 x and *Merc.*, 3 x, are the remedies.

Avoid taking cold and other remedies will not be needed.

Nausea. (214)—*Ipecac*, 1 x, is generally all the remedy needed. Violent nausea and vomiting, when not controllable by ipecac, may find a remedy in *Antimony Tart.*, 3 x.

Neuralgia. (215)—*Acon.*, 1 x, from cold, with fever, in teeth and face.

Bell., 3 x, pain in the teeth and face, more particularly on the right side ; red, flushed face.

Colocynth, 2 x, severe pain on left side of face.

Ars., 3 x, pain as of hot needles piercing through the skin ; cases of a chronic nature.

Cheledonium Maj., 3 x, pain in right shoulder and side.

Phos., 3 x, severe, long-continued neuralgia of any part of the body. The application of heat is very beneficial.

Galvanism will often hasten the cure of the remedies.

Neuralgia of the Heart. (217) (Angina Pectoris.)—*Amyl Nitrate*, by inhalation at time of attack.

Ars., 3 x, a very useful remedy to prevent the recurrence of an attack. Smoking should be stopped by those who suffer from the disease.

Night-Mare. (217)—A dose of *Nux Vom.*, 3 x, at bed-time will usually overcome the trouble.

Nocturnal Emissions. (218) *Gels.*, 1 x, will generally overcome the nervous depression accompanying this trouble.

Nux Vom., 1 x, three times daily as a nerve tonic.

Camphor Bromide, 1 x, at bed-time, to prevent the dreams leading to such a result. The organs should be bathed with cold water at bed-time, nightly.

Noises in the Ear. (218) (Tinnitus Aurium.)—One of the best remedies is *Puls.*, 3 x, for this trouble.

China, 1 x, for noises in the ear as a result of losing a large amount of blood. Ear wax should be removed by putting a few drops of glycerine in the ear at night, for two or three times.

Offensive Breath. (219)—*Salycilic Acid*, 3 x, after each meal, is the best corrective known.

Pains in the Side, (219) relieved by *Acon.*, 1 x, and *Bryonia*, 3 x.

Palpitation of the Heart. (219)—*Acon.*, 3 x, when the result of fright ; severe and prolonged anxiety.

Cactus Grand., 3 x, when due from fatty heart.

Coffea, 3 x, nervous palpitation.

Mochus, 3 x, severe and acute attacks.

Palsy. (220) (Paralysis.)—When acute, following an attack of apoplexy, *Arnica*, 3 x, will hasten the absorption of the blood in the brain.

Nux Vom., 3 x, and *Gels.*, 1 x, will restore the nerve stimulus to the affected muscles in many cases. *Faradization* is very useful.

Paralysis, Agitans. (220) (Shaking Palsy.)—Should be treated by a physician, as well as *Paraplegia*, (paralysis of the lower extremities), as they are generally caused by some deep seated disease of the nerve centers.

Papulous Scale. (223) (Eczema.)—The remedies most generally used are *Croton Tig.*, 30, for ulcerating skin.

Rhus Tox., 3 x, severe itching, with thickened, red skin.

Canth., 3 x, vesicular (watery) blisters on the skin.

Graph., 30, dry, cracked skin.

Ars., 3 x, old, chronic cases; dry, fish scaly skin.

Sulphur, cc, will benefit cases which have become chronic and do not respond to the other remedies. Ointments generally aggravate the trouble.

Piles. (223) (Hæmorrhoids.)—*Æsculus Hip.*, 3 x, pain in the back; constipation and piles.

Collinsonia, 1 x, very useful for piles that protrude, with constipation.

Hamamelis, 1 x, bleeding piles, both internal and external.

Nux Vom., 3 x, and *Sulphur*, 30, have cured many cases, in alternation, *Sulph.* in the morning and *Nux.* at night. Suppositories made from the above remedies are also very useful.

Pleurisy. (224) (Pleuritis.)—*Aconite*, 1 x, and *Bry.*, 3 x, alternately. *Acon.*, 1 x, during the first two or three days, with fever, followed by *Bry.*, 3 x, for four or five days, and later, *Sulphur*, cc, to finish up the case. Hot poultices should be applied to the chest.

Purulent Opthalmia. (225)—*Merc. Sol.*, 3 x, and *Sulph.*, cc, will be all the remedies needed, generally. An eye wash of *Nitrate of Silver*, one-half grain to the ounce of water, should be used twice daily, until better.

A towel used by a person suffering from this disease should not be used by others, as the disease is infectious.

Quinsy. (226)—(See Tonsilitis.)

Prickly Heat. (227) (Nettle Rash.)—(See Urticaria.)

Polypus of the Ear, (227) Nose, Womb, Etc.—All should be removed by a surgical operation. *Teucrium*, 1 x, and *Sanguinaria Nit.*, 3 x, are the homœopathic remedies.

Rheumatism. (228)—*Aconite*, 1 x, characteristic fever, caused by cold; pain and restlessness.

Bry., 3 x, swelling of the joints, which are very painful and worse from moving about.

Merc. Viv., 3 x, obstinate inflammation of single joints, worse at night; deep pain, as if it were in the bones; profuse perspiration, but not relieved by it.

Puls., 3 x, sub-acute cases with little fever; pains shift rapidly from one joint to another.

Rhus Tox., fever; parts red and swollen; pains drawing, tearing, burning, feels worse when at rest and better from continued motion. Worse damp or wet weather.

Wrapping the swollen joints with cotton batting relieves the pain very much. A solution of Bicarbonate of Soda and hot water, for bathing, is also useful.

Ring-Worm. (230) (Herpes Circinatis.)—*Sepia*, 30, one dose daily, for a week, will cure. *Cantharides* ϕ, locally, also will cure.

Nettle Rash. (231)—(See Urticaria.)

Scarlet Fever or Scarlatina. (232)—Simple scarlet fever should be treated by *Acon.*, 1 x, if there be much fever, with wiry pulse; restlessness, etc.

Bell., 3 x, is almost a specific for this form. It has red face; sore throat; slight delirium.

Rhus Tox., 3 x, much itching of the skin in connection with the symptoms under *Acon.* and *Bell.*

Scarlatina Anginosa. (233)—*Apis. Mel.*, 3 x, great swelling of the throat, so much so that the blood cannot flow properly to and from the brain, which causes a comatose condition.

Merc. Iod., 3 x, great swelling of the glands about the throat externally; ulceration of the throat.

Scarlatina Maligna. (234)—*Ailanthus*, 1 x, very malignant cases, violent vomiting; severe headache; dark, red face; rapid, small pulse; high temperature; muttering delirium; dark, livid, miliary rash.

Cuprum Acet., 30, sudden retrocession of eruption, followed by vomiting; convulsions; rolling of eyes; distortion of face; stupor and delirium; brain severely affected.

Muriatic Acid., 1 x, severe ulceration of the throat.

For *Nephritis* and *Dropsy*, following scarlet fever, *Ars.*, 3 x, *Asclepius Syrica*, 3 x, *Apis Mel.*, 3 x, and *Terebinth.*, 1 x, are the remedies.

Give all other children in the house *Bell.*, 3 x, who have been exposed to the disease. The diet should be principally milk. All acids should be excluded. Keep a careful watch of the patient for a month or more and the child should not be allowed to return to school for, at least, six weeks.

Sciatica. (236)—*Acon.*, 1 x, fever, with restlessness, caused by a cold.

Bry., 3 x, pain is increased or brought on by movement.

Cimicifuga, 1 x, drawing, tearing pain over the course of the sciatic nerve.

Rhus Tox., 3 x, pain is better from warmth and worse during stormy and wet weather, better from shifting one's position.

Bry. and *Rhus.* are the chief remedies.

Galvanism should be resorted to if the trouble does not yield readily to medicine.

Scrofula. (236) (King's Evil.)—*Calc. Carb.*, 30, *Calc. Iod.*, 3 x, *Iodine*, 3 x, *Kali Hydroid.*, 3 x, *Sulphur*, cc.

Calc. Carb., 30, for fair skinned, plump, waxy children; teeth delayed; swollen glands; discharges from eyes, ears, nose, etc.

Calc. Iodide, 3 x, same as *Calc. Carb.*, when the latter does not succeed.

Iodine, 3 x, glandula enlargements, with wasting of the muscular tissue. Child is very thin in flesh. Meseutiric glands enlarged.

Kali Hydroid., 1 x, little nodules under the skin; lymphatic system involved deeply; disease of the bones, etc.

Cod-liver oil is often useful in those cases that are especially emaciated, and who do not seem to assimilate food, yet plenty is taken; it should not be taken if fever is present.

Scurvy. (239)—*Citric Acid*, 1 x, or lemon juice, the best remedies.

Kali Bich., 3 x, salivation with sore gums and hæmmorrhage under the skin.

Acid Sulphuric, dilute, five drops every three hours, for hæmmorrhage from mouth, stomach or bowels. The diet should consist of fresh meat, vegetables and milk.

Sea-Sickness. (240)—*Cocculus*, 30, the great remedy for seasickness, either from vessel sailing, car or carriage riding.

Small Pox. (240) (Variola.)—*Bell.*, 3 x, high fever; severe local symptoms; throbbing of the blood-vessels about the neck and face; red eyes; sore throat; severe pain in back; starting and jumping in sleep; delirium.

Antimonium Tart., one of the most useful remedies, keeping suppuration from being too severe, corrects disarrangements of the stomach and bronchial and lung symptoms.

Merc. Viv., 3 x, suppurative fever; moist, swollen tongue; ulcerated throat; fœtid breath; profuse flow of saliva. Many other remedies are used, under the guidance of a physician, such as *Baptisia*, *Verat. Vir.*, *Bryonia*, *Phosphorus*, *Hepar Sulph.*, *Stramonium*, *Camphora*, *Sulphur*, etc.

Allow a liberal liquid diet, and feed as often as every three hours. Keep the pustules covered with cosmoline.

Sore Mouth. (245) (Aphtha.)—*Ars.*, 3 x, and *Merc.*, 3 x, are the remedies, internally. Use a wash of Golden Seal, fluid extract, one part to ten of water.

Sore Tongue. (246)—(See Sore Mouth.)

Diseases of the Spinal Cord. (246)—Seek professional advice at once.

Acon., 1 x, for the fever and anxiety.

Gels., 1 x, patient is very nervous with convulsions.

Cicuta Virosa, 6 x, violent convulsions from irritability of the spinal cord.

Stiff Neck. (247)—If caused from sitting in a draft, give *Acon.*, 1 x.

Rhus Tox., 3 x, from getting wet.

Lachnanthus, 3 x, stiff neck, following diphtheria. *Faradization* will promptly relieve.

Sore Throat. (247)—(See Diphtheria.)

Tonsilitis. (199)—(See Quinsy.)

Ulcerated Sore Throat. (257)—*Acon.*, 1 x, or *Bell.*, 3 x, simple sore throat from cold.

Merc., 3 x, and, *Kali Bich.*, 3 x, for inflammation of the follicles of the throat, commonly, but very improperly called "diphtheretic sore throat."

Stitch in the Side. (248)—*Acon.*, 1 x, effects of a cold; rheumatism of the muscles of the chest.

Bry., 3 x, dry cough, with stitches in the chest.

St. Vitus' Dance. (248) (Chorea.)—The leading remedies are *Ignatia*, 30, *Cimicifuga*, 3 x, *Arsenicum*, 3 x, *Ferrum*, 1 x, *Cuprum*, 30, *Zinc*, 30. If the result of a fright, give *Ignatia*, 30: if from debility, *Ferrum*: if from rheumatism, *Cimicif.*, 3 x: if from brain and spinal lesions, *Cuprum*, 30, and *Zinc*, 30.

Galvanism should be used at the same time.

Styes. (Hordeolem.)—*Puls.*, 3 x, will generally stop them. A course of *Sulphur*, cc, will prevent a recurrence.

Squinting. (251)—If from brain irritation, *Cimic.*, 3 x, and *Zinc*, 30, will benefit. From contracted muscle, a surgical operation.

Suppression of Urine. (251)—Apply hot applications over the region of the kidneys, and give *Acon.*, 1 x, and *Terebin.*, 3 x, alternately.

The hot pack will be useful also.

Syphilis. (252)—Put yourself under an able surgeon's care. The remedies are *Nitric Acid*, 3 x, *Merc.*, 3 x, *Kali Iod.*, 1 x, *Stillingia*, 1 x, *Thuja Oc.*, 1 x. Medicine should be continued from one to two years.

Tetter. (255)—(See Urticaria.)

Toothache. (256)—*Acon.*, 1 x, when from cold.

Bell., 1 x, with red, flushed face, and pressure of blood to the brain.

Merc., 3 x, tendency of the tooth root to ulcerate.

Ulceration of the Bones. (257)—*Silicea*, 3 x, suppuration following an injury, also *Calc. Phos.*, 3 x. When the ulceration is the result of syphilis, give *Kali Iod.*, 1 x, or *Nitric Acid.* Dead bone should be removed, and the diseased part washed out with a solution of Calendula, one part to eight of hot water. A surgeon should have the care of the case.

Ulcers of the Leg. *Ars.*, 3 x, burning pain in the ulcer; low state of the blood.

Silicea, 30, deep, excavating ulceration; varicose veins. Use a wash of Calendula, one part to ten of water, and bandage with rubber. After they have healed, wear an elastic stocking.

Vomiting. (260)—*Ipecac*, 1 x, nausea and vomiting; yellow coated tongue.

Arsenicum, 30, red tongue; everything is vomited as soon as taken; burning pain in stomach; thirst.

Antimony Tart., 6 x, vomiting, caused by irritation at the base of the brain.

Verat. Alb., vomiting, attending diarrhœa. Small pieces of ice held in the mouth or swallowed, will often arrest vomiting. A mustard paste over the stomach will help.

Warts. (261)—*Thuja Oc.*, 3 x, internally, and ϕ locally.

Wasting. (262) (Emaciation, Atrophy.)—*Calc. Iod.*, 3 x, where the trouble is with the lymphatic system; scrofulous.

Calc. Phos., 3 x, children with large heads, where the bones have not properly closed.

Iodine, 3 x, one of the best remedies in Atrophy. Cod-liver oil, when without fever, the system does not seem to appropriate food taken.

Water Brash. (262)—*Nux Vom.*, 3 x, will generally remove the troublesome symptom.

Watery Eyes. (263)—After opening the lacrymal ducts, give *Silicea*, 30, twice daily.

White Swelling. (263)—Give the remedies recommended under Scrofula. An elastic knee cap will help to remove the effusion.

Running of the Ear. (264)—Apply to a surgeon.

Merc., 3 x, and *Hepar Sulph.*, 3 x, internally.

Wax in the Ear. (264)—A few drops of glycerine dropped into the ear for a few nights will soften the wax. Give *Stavisagria*, 30, once daily.

Worms. (265)—*Cina*, 30, will remove symptoms occasioned by worms.

Artemisa Vulgaris, 1 x, convulsive and nervous irritation caused by worms.

The Diseases Peculiar to Women. (266)—Many of the diseases peculiar to the sex, are not known until after they have become mothers. From this, then you will infer, arises many of the ills to which parturient woman is subject. Why should they arise at this time, as childbirth, is "a purely physiological process?" In its normal and natural condition it is, but too often, that the processes of nature are interfered with by wearing corsets, lack of exercise, nerve tire, stimulants, etc. These artificial means help to produce a complicated labor, and from that we may have ruptures, that in the future (unless repaired by the surgeon) will be sure to entail a life-long misery. Too often women keep such troubles to themselves, instead of going to a physician and seeking his aid. A physician who has had special training in this department should be sought, for too often the general practitioners cannot make a diagnosis of these cases, and their treatment will be ineffective, while the specialist, from special training, rarely fails to find the cause of trouble and applies the proper remedy.

When a woman feels that she is growing more discontented with life, that it is a burden, and she is very nervous and irritable, she should consult her physician, and nine times out of ten the whole trouble will be with the womb. It is not necessary that she should have pain in the womb or the pelvis, for she rarely will at this point. Nervous headaches, sick headaches, neuralgia, etc., as a rule, have their exciting cause in the womb.

Ruptures of the neck of the womb, during child-birth, and of the perineum, are the most frequent causes of ulceration and displacements of the womb. The specialist, to-day, is able to cure these cases permanently, and that without caustics, which too often increase the nervous symptoms without giving relief. Do not hesitate to seek the physician, and insist upon it that he fully understands your case. He can only be versant with it through an examination. What would you think of a physician who would treat your throat without looking at it; do you think he would be able to diagnose a case of diphtheria from inflammation of the follicles? No, he could not; and while one is a very fatal disease, the other never is. Shun the physician who will go on, week in and week out, without examining your case properly, unless you are satisfied his prescriptions are having the desired effect. In unmarried ladies this is not always necessary, or even in the married, but if the case progresses without benefit, a local examination becomes necessary, and when such seems justified, do not hesitate to have it done, for many a malignant disease could be cured in the beginning, that later becomes rooted and cannot be removed. Ladies, believe this, and teach it to your daughters. Menstruation should be free from pain, and occur every twenty-eight days; any deviation from this is abnormal.

Delayed Menstruation. (269)—If caused by a cold or wetting the feet at a previous period, give *Acon.*, 1 x, particularly if the patient is feverish and has congestion of the head, also in young girls who are away from home, at school, etc.

Puls., 3 x, will generally restore the menses or bring them on when suppressed.

Sanguinaria, 3 x, when delayed menses are accompanied by a cough, neuralgia of the head, bleeding from the nose and cramp in the stomach, etc.

Senecin, 3 x, cough with suppression of the menses.

Obstructed Menses. (270)—May be malformation and need the care of a surgeon. When caused by congestion, *Bell.*, 3 x, is the proper remedy. Hot vaginal injections, containing a few drops of Fluid Extract of Belladonna, may also be used.

Painful Menstruation. (271) (Dysmenorrhœa.)—A very common trouble in flexions of the womb and disease of itself or its appendages. If acute and caused by a cold, *Acon.*, 3 x, will be the remedy. *Puls.*, 30, will be found to be an admirable remedy at the time of the pain, when ovarian.

Thuja Oc., 1 x, once a day during the intervals; congestion of the ovaries; a flexion should be overcome; a narrow canal should be enlarged.

Profuse Menstruation. (272)(Menorrhagia.)—*Calc. Carb.*, 30, the remedy most useful in the large majority of cases. Never take iron in such cases. If the above does not help, go to a physician for examination. One of the most frequent symptoms of *polypus*, *fibroid tumors*, *granular degeneration* of the mucous membrane of the womb, and even *cancer*, is the profuse menses. When the flow continues all the time, and stops for a day or two and again returns, (Metorrgia.) depend upon it, your case needs the attendance of a specially trained physician.

Cessation of Menses. (272)—At this time women are subject to "hot flashes." (*Lachesis*, 30.) profuse menses from granular trouble of the mucous membrane and other troubles. At this time woman needs the care of an able physician, and should consult him frequently, if everything is not perfectly normal.

Falling of the Womb. (275)—A result of either a ruptured perenium or an increased weight from above. (tumors, enlargement, etc.) The treatment is principally mechanical and surgical.

Lillium Lig., 30, much used in these troubles.

Inflammation of the Ovaries. (276) (Ovaritis.)—*Acon.*, 1 x, and *Puls.*, 3 x, alternately. Hot applications externally, and very hot vaginal injections.

Apis Mel., 3 x, if the pain is stinging, worse on the right side. *Clematis*, 30, a deathlike, sickening pain. *Lach.*, 30, left sided pain.

Inflammation of the Womb. (276)—A doubtful process, except in the parturient state; congestion frequent.

Acon., 1 x, *Gels.*, 1 x, and *Bell.*, 3 x. Use hot vaginal injections freely, medicated with *Bell.* ϕ.

Ulceration of the Womb. (276)—The result, generally, of a rupture and should be repaired. Use hot vaginal injections of *Calendula*, one part to ten of water. Golden Seal in the place of Calendula is often useful. Take same remedies as for congestion.

Flooding. (See Profuse Menstruation, Menorrhagia, etc.)

Polypus of the Womb. (277)—Prompt removal. Give *China*, 3 x, to restore the strength.

Cancer of the Womb. (277)—A dangerous and too often fatal disease. This disease gains a firm hold of a patient, often because she will not go to a physician and have an examination. A simple, curable ulceration will often become cancerous if allowed to continue.

A rupture of the uterine neck, which can be repaired as easily as a tooth can be filled, will be allowed to go on, and at the change of life a *cancer* may find a resting place in the laceration, which would never have occurred, had proper surgical means been employed.

I have written thus fully, so that you may understand how much easier these troubles may be prevented, than cured when once seated. When it first commences, it can often be removed, and with proper after treatment, under the eye of a surgeon, homœopathic remedies can offer much as preventions and comforting remedies. Cures made by any medicine are doubtful. Such remedies as *Ars.*, *Condurango* and *Lachesis* are useful.

Whites. (278) (Leucorrhœa.)—This is only a symptom of some disease of the womb, and can only be cured by giving such remedies as will cure the primary trouble. *Ars.*, 3 x, will be useful if the discharge causes a burning in the vagina, is profuse and watery.

Merc., 3 x, the discharge makes the skin sore, is thick and yellow or greenish.

Kreasotum, 4 x, discharge offensive, of any consistency.

Nux Vom., 3 x, debility ; menses too soon ; constipation, etc.

Calc. Carb., 30, profuse menses ; yellow, profuse leucorrhœa.

Sepia, 30. relaxed mucous membrane ; sick and nervous headaches ; delaying menses ; chronic uterine troubles.

Sulphur, cc, useful where any of the other remedies seem to be indicated but do not help. Calendula solution by injection, also Golden Seal.

Diseases Occurring During Pregnancy. (280)—*Morning Sickness* (Nausea.) This is generally relieved by *Nux*, 3 x, and to be given for faintness and nausea with constipation.

Bry., 3 x, is also a valuable remedy, where the nausea begins or is made worse by moving about ; must lie in bed or she will vomit. This is a reflex action of the sympathetic nerves, the real cause being congestion and often ulceration of the uterine neck. A small amount of hot water (one pint) may be used by vaginal injection once daily, to which may be added Hamamelis or Borax.

Constipation. (284)—Often a troublesome complaint and generally relieved by *Nux Vom.*, 3 x.

Heartburn, *Lactic Acid*, cc, is an admirable remedy.

Irritable Bladder. (284) (Frequent Desire to Make Water.) *Cantharis*, 3 x, will generally relieve. If the pain is stinging, give *Apis Mel.*, 3 x.

Cramp of the Legs.—Relieved by *Cuprum Acet.*, 6 x.

Varicose Veins. *Hamamelis*, 1 x, internally, a good remedy. The extract may also be used externally.

Pruritus. (285) (Itching.)—*Merc. Cor.*, 3 x, internally and externally.

Mealancholy, Despondency, etc. (285)—*Acon.*, 30, will overcome the fear and consequent nervous depression under which many pregnant women labor.

Inflammation of the Breast. (286) (Mammitis.)—This should be prevented: first, by not allowing the patient a liquid diet for the first five days. The breasts should not be squeezed or rubbed, but the milk should be fully removed by the child or a breast pump. At the first indication of inflammation, hot applications should be used and *Bell.*, 3 x, give internally. If this is not done and the breasts become very hard, beside the hot applications give *Phytolacca*, 1 x, alternately with *Bell.* Should abscess result, it should be opened early, and *Hepar Sulph.*, 3 x, given internally.

Sore Nipples. (288)—Give *Silicea*, 30, internally, and apply *Calendula* ϕ, one part to ten of flexible Collodion, over the cracks or ulcers.

Milk Fever (288) seldom requires much, but if severe, give *Acon.*, 1 x. Should the brain suffer and the patient talk in her sleep, *Bell.*, 3 x, will be suitable.

Confinement. (289)—At such times a well qualified physician should be in attendance. Many, indeed the majority of cases, progress without interference, and the wise physician knows when to let *well enough* alone, while the less wise, by unnecessary interference, often makes a serious case out of an otherwise simple one. Much can be done to regulate the pains, to have the child present properly, and pass perfectly through the pelvis, but unless properly applied and at the right moment, it best be left to nature.

Homœopathic remedies are very efficacious, both during and after confinement, and many of the annoyances are passed by their use.

Abortion or Miscarriage. (292)—*Calc. Carb.*, 30, will prevent abortion in many cases, particularly such as have a tendency to abort at the sixth or eighth week. *Sabina*, 1 x, third month; pain with slight hæmorrhage.

Secale Cor., 3 x, sixth month; violent contractive pain. Those who are subject to abortion or miscarriage, should keep very quiet at

the monthly nisis, or at such time as the menses would occur had they not been checked by pregnancy.

Anemia. (294)—*Ars.*, 3 x, green sickness, when the result of a perverted nervous action.

China, 3 x, resulting from excessive loss of blood or any debilitating discharges.

Ferrum, 1 x, deficiency of red blood globules. A change of climate, scene, air, etc., is often very beneficial.

Barrenness (295) arises from many different causes and as the cause can only be found by a physician, you should seek his advice.

Hysteria. (296)—This is a perverted nervous action, generally arising from uterine or ovarian disease, and the cause must be found and properly treated to lead to a cure.

Gels., 1 x, very nervous, with hysterical convulsions.

Mochus, 3 x, useful in many of the symptoms, such as palpitation of the heart, cramp of the stomach, neuralgia, etc., of hysterical subjects.

Puerperal Fever. (298)—A blood poisoning caused by absorption of offensive or putrid material, either by an abrasion of the vaginal tract, or through the uterine bood vessels. It should be prevented by using a warm vaginal injection, every twelve hours, containing a little Calendula, for two weeks. If at any time the lochial discharge becomes offensive, use *Carbolic Acid* enough to scent the water, and give *Kreasotum*, 4 x, internally. *Acon.*, 1 x, *Bell.*, 3 x, *Ars.*, 3 x, *Verat. Vir.*, 1 x, *Baptisia* ϕ, or 1 x, *Rhus Tox.* and *Radicans*, 3 x, and many other remedies are used, but without the proper cleansing of the vaginal tract, they are of little use.

Puerperal Convulsions. (299)—If caused by uremic poisoning, very dangerous. *Bell.*, 3 x, *Helleborous*, 3 x, and *Cicute*, 6 x, are very useful, together with any means to get the patient perspiring. An experienced physician should be summoned, and the case given to his full charge. Anæsthetics often have to be given and the child delivered with instruments. At other times any simple remedy will answer.

Puerperal Mania. (299)—*Cimic.*, 3 x, *Hyoscamus*, 1 x, *Zinc*, 30, and *Kali Bromide*, have all cured this distressing complaint.

Milk Leg. (299) (Phlegmasia.)—*Acon.*, 1 x, and *Puls.*, 3 x, alternately, will often cut an attack short at the beginning. *Extract of Hamamelis* is a good application, locally.

Itching of the Genital Organs. (300)—(See Pruritus.) *Ars.*, 3 x. *Merc.*, 3 x, *Rhus Tox.*, 3 x, all good.

Diseases of Children. (301)—

Jaundice of Infants. (313)—*Acon.*, 3 x, will be useful if the child is feverish and very restless.

China, 6 x, constipation, with much bile in the system.

Merc., 6 x, skin very yellow; stools white (clay color).

Phos., 30, one of the best remedies when the child has a hacking cough.

Retention, Suppression and Difficulty of Voiding the Urine. (314)—Apply hot clothes over the kidneys, and give *Acon.*, 3 x, every hour.

Canth., 3 x, will often succeed when Acon. fails. The case should be examined for any malformation.

Incontinence of Urine. (315)—Wetting the bed is very common during childhood. If caused by worms, or intestinal irritation, *Cina*, 30, will benefit.

Ferrum Acet., 3 x, in delicate blonde children.

Equisetum Hyemale, 3 x, is also a useful remedy to break up the habit.

Teething. (315)—*Calc. Carb.*, 30, will generally advance the teeth when they are delayed.

Kreasotum, 4 x, often relieves the sensitiveness of the gums and reflex nervous excitement.

Chamomilla, 30, child is very nervous and cries often; colic and diarrhœa.

Diabetes. (316)—*Uranium Nitrate*, 3 x, and *Phosphoric Acid*, 1 x, are the most useful remedies. (See Diabetes Mellitus.)

Erysipelas. (317)—*Bell.*, 3 x, on the face, worse on right side; an inflamed, even surface.

Rhus Tox, 3 x, burning pain, with vesicles filled with serum.

Arnica, 3 x, erysipelas, very painful and sore to touch.

Apis Mel., 3 x, *Canth.*, 3 x, *Acon.*, 1 x, and *Ars.*, 3 x, are also used.

Thrush. (317) (Apthæ.)—*Ars.*, 30, when it occurs during the course of a debilitating disease.

Merc. Cor., 3 x, occurs suddenly, without previous symptoms.

Hydrastis, 1 x, lingers and does not readily disappear; stomach out of order.

Colic. (319)—*Colocynth*, 3 x, is generally the first remedy called for.

Plumbum Carb., 30, long continued colic with constipation.

Chamomilla, 30, colic during dentition.

Constipation. (320)—*Nux Vom.*, 3 x, where the trouble arises from an inaction of the muscular coats of the intestines.

Opium, 30, stool hard, composed of small hard balls. *Bry.*, 3 x, is given for alternate constipation and diarrhœa. If the child is taking cow's milk, salt it. Do not give physic; and if the above remedies do not cure, go to a physician.

Vomiting. (321)—*Ipecac*, 1 x, nausea and vomiting.

Ars., 3 x, red tongue, with vomiting of everything as soon as taken. Where it is the result of irritation of the brain, such remedies as *Zinc*, 30, *Hellebore*, 3 x, and *Antimony Tart.*, 3 x, are all useful.

Diarrhœa. (321)—*China* ϕ, summer, painless diarrhœa.

Ars., 3 x, vomiting and diarrhœa; red tongue, with burning pain in the bowels.

Coloc., 3 x, diarrhœa with colic.

Verat. Alb., 1 x, vomiting and diarrhœa; cold sweats; cramps, cholera morbus.

Bell., 3 x, hot head, burning, red face, with diarrhœa.

Helleborus, 3 x, tendency to water on the brain, during a diarrhœa; cholera infantum.

Summer Complaint. (322) (Cholera Infantum.)—(See Diarrhœa.) The diet of the child is generally at fault and should be changed or corrected.

Worms. (325)—*Sautonine*, 1 x, for stomach worms.

Ratanhia, 1 x, pin worms.

Sore Eyes. (325)—(See Opthalmia.)

Croup. (326)—*Acon.*, 1 x, and *Spongia*, 3 x, alternately, for spasmodic croup.

Membranous Croup. *Kali Bich.*, 3 x, the best remedy. A Solution of Chloride of Lime, by inhalation. It often becomes necessary to perform tracheotomy.

Spasm of the Glottis. (328)—*Acon.*, 1 x, is all the remedy needed generally.

Snuffles, or Cold in the Head. (329)—*Acon.*, 3 x, and *Bry.*, 3 x, are the remedies most generally useful. *Kali Iod.*, 3 x, also an admirable remedy.

Whooping Cough. (329)—*Bell.*, 3 x, flushed face, with violent spasm. *Ipecac*, 1 x, vomiting accompanying the cough.

Cuprum Acet., 30, violent whooping which is constant.

Corralium Rubum, 30, will cure many cases as though by magic.

Verat. Vir., 1 x, may be useful if the chest becomes congested. Violent attacks of whooping cough can be controlled by *Kali Bromide*, *Bell.* and *Castanea Vesica*, and they should be used under the special direction of the physician.

Convulsions, Fits, Spasms. (331)—Send for a physician and give *Bell.*, 3 x, every ten minutes if the face is flushed, if not, *Gels.*, 1 x, will be a more useful remedy.

Measles. (332)—Usually a very mild disease; particularly so under homœopathic treatment.

Acon., 3 x, during the first two or three days. Sneezing; hacking cough; fever and restlessness.

Bell., 3 x, much pressure of blood to the brain; mild delirium.

Cuprum Acet., 30, sudden disappearance of the eruption when only partially out.

Puls., 3 x, much running of a watery fluid from the eyes and nose; cough; diarrhœa, etc., one of the best remedies in this disease.

Sambucus, 1 x, if there is much bronchitis, give this remedy.

Hepar Sulph., 3 x, toward the end of the disease, to prevent sequela. The same remedies are used in malignant or **Black Measles,** (333) but a physician should be called, for any remedy may become necessary in the Materia Medica.

Rickets. (33)—*Calc. Carb.*, 30, and *Calc. Iod.*, 3 x, *Kali Iod.*, 3 x, *Iodine*, 3 x, are the principal remedies for this defect of osseus nutrition.

HOMŒOPATHIC

REMEDIES USED IN THIS WORK.

SCIENTIFIC NAME.	ABBREVIATION.	COMMON NAME.
Acid, Benzoic,	Acid Benz.,	
Acid, Phosphoric,	" Phos.,	
Acid, Sulphuric, Dilute,	" Sulph. Dil.,	
Aconitum Napellus,	Acon.,	Wolf's Bane.
Antimonium Tartaricum,	Ant. Tart.,	Tartar Emetic.
Apis Mellifica,	Apis,	Poison of Honey Bee.
Apocynum Cannabicum,	Apoc. C.,	Indian Hemp.
Argentum Nitricum,	Arg. Nit.,	Nitrate of Silver.
Arnica Montana,	Arn.,	Leopard's-Bane.
Arsenicum Album,	Ars.,	Arsenious Acid.
Baptisia Tinctora,	Bapt.,	Wild Indigo.
Belladonna,	Bell.,	Deadly Nightshade.
Bryonia Alba,	Bry.,	White Bryonia.
Cactus Grandiflorus,	Cact. G.,	Night Blooming Cereus.
Calcarea Carbonica,	Calc. Carb.,	Carbonate of Lime.
Calcarea Phosphorica,	Calc. Phos.,	Phosphate of Lime.
Calendula Officinalis,	Calendula,	Common Eng. Marigold
Camphora,	Camph.,	Laurus Camphor.
Cantharides,	Canth.,	Spanish Fly.
Carbo Vegetabilis,	Carbo. Veg.,	Vegetable Charcoal.
Caulophyllum Thalictroides,	Caul.,	Blue Cohosh.
Chamomilla,	Cham.,	Matricuria Chamomilla.
China Cinchona,	China,	Peruvian Bark.
Coffea Cruda,	Coffea,	Arabian Coffee.
Colocynthis,	Col.,	Bitter Cucumber.
Cuprum Aceticum,	Cup. Acet.,	Acetate of Copper.
Digitalis Purpurea,	Dig.,	Purple Foxglove.
Dulcamara,	Dulc.,	Bitter-Sweet.
Gelseminum Semperoirens,	Gels.,	Yellow Jassamine.
Glonoine,	Glon.,	Nitro-Glycerine.
Hamamelis Virginica,	Hama.,	Witch Hazel.
Helleborus Niger,	Hell.,	Christmas Rose.

SCIENTIFIC NAME.	ABBREVIATION.	COMMON NAME.
Hepar Sulphuris Calcareum,	Hepar Sulph.,	Sulphide of Calcium.
Hyoscyamus Niger,	Hyos.,	Henbane.
Hypericum Perforatum,	Hyper.,	St. John's Wort.
Ignatia Amara,	Ign.,	St. Ignatius' Bean.
Ipecacuanha,	Ipecac.,	Cephælis Ipecacuanha.
Kali Bichromicum,	Kali Bich.,	Bichromate of Potash.
Kreosotum,	Kreo.,	Creosote.
Lachesis,	Lach.,	Trigonocephalis Lachesis.
Lycopodium Clavatum,	Lycop.,	Club Moss.
Lilium Tigrinum,	Lil. Tig.,	Tiger Lily.
Mercurius Vivus,	Merc. Viv.,	Quicksilver.
Mercurious Protoide,	Merc. Prot.,	Yellow Iodide of Mercury.
Mochus,	Mosc.,	Musk.
Natrum Muriaticum,	Natr. Mur.,	Chloride of Sodium.
Nux Vomica,	Nux V.,	Strychnos Nux Vomica.
Opium,	Opi.,	Poppy.
Phosphorus,	Phos.,	An Element.
Podophillum Peltatum,	Podo.,	Mandrake.
Pulsatilla Nigricans,	Puls.,	Wind Flower.
Rathanhia.		
Rumex Crispus.	Rumex,	Yellow Dock.
Rhus Toxicodendron,	Rhus Tox.,	Poison Oak.
Sabina,	Sabina,	Common Savine.
Secale Coruntum,	Secale Cor.,	Smut of Rye.
Sepia,	Sepia,	Cuttle-Fish Juice.
Silicea,	Silicea,	Quartz.
Spongia Tosta,	Spongia,	Toasted Sponge.
Sulphur,	Sulph.,	Flowers of Sulphur.
Thuja Occidentalis.	Thuja.,	Arbor-Vitæ.
Veratrum Album,	Verat. Alb.,	White Hellebore.
Veratrum Viride,	Verat. Vir.,	Green Hellebore.
Zincum,	Zinc.,	Zinc.

HOMŒOPATHIC
MATERIA MEDICA.

CONDENSED.

Aconite (*Monkshood*). Chiefly affects the circulatory system. Useful in inflammatory fever, fever heat, with dry skin, and restlessness. The pulse is fine, quick and wiry; dry cough, or croupy cough; rousing from sleep; pleurisy; spitting of blood and nose-bleed; neuralgia and rheumatism, with stinging pains; complaints from dry, cold air, and fright; pains aggravated at night, relieved by sitting up.

Apis Mel. (*Poison of the Honey Bee*). Shortness of breath from dropsy; dropsical affections; swellings, especially when attended with biting, gnawing, stinging, and itching; swellings resembling those arising from the sting of a bee; useful in urinary troubles, when the urine is scanty and its emissions attended by a scalding, burning sensation.

Arnica Montana. For complaints of nervous individuals; full plethoric habit; rheumatic pains; apoplexy and paralysis; bloodshot spots from bruises; effects of sprains, strains and contusions; painful and excessive sensitiveness of the whole body; convulsions and tetanic spasms from injuries.

Arsenicum (*Arsenious Acid*). Chiefly affects the alimentary canal, respitatory organs, and skin. *Burning* pains in the stomach, bowels and elsewhere, relieved by hot applications; vomiting, cramp in the stomach, diarrhœa; asthma; scaly eruptions, burning ulcers all *worse* soon after midnight; great restlessness and prostration; great thirst, with drinking frequently, but little at a time; complaints from ice cream, ice water, tobacco.

Belladonna (*Deadly Nightshade*). Chiefly affects the brain, nerves and glands. Fever heat with *moist* skin, *drowsy* sleep or inability to go to sleep; starting in sleep; congestion of blood to head, eyes and face; throbbing headache; neuralgia of the face; throbbing toothache; dentition, with jerking in the sleep or convulsions; sore throat; barking cough; erysipelas.

Bryonia Alb. (*White Bryonia*). Chiefly affects the muscles, fibrous tissues of joints, lung, liver and respiratory organs. Biliousness, with thick white coating of the tongue; bitter tastes; chilliness; bursting headache; stitches in the chest; dry, painful cough, worse on entering a warm room, with stitch-pain, all worse from motion. Pleurisy; peritonitis.

Calcarea Carb. (*Prepared Oyster Shell*). Ailments connected with scrofulous and rickety children, especially when there is a predominant disposition to fluent coryza, cold and diarrhœa, or it is particularly adapted to frail individuals being poorly fed, also to such as have in their youth a marked disposition for growing fat and stout. It is also of *benefit* in ailments arising from teething, and in slow, protracted dentition. Sour smelling diarrhœa during dentition.

Cantharis (*Spanish Fly*). In affections of the urinary organs, as in inflammation of the bladder and kidneys, in retention of urine, also where there is strangery and discharge of blood. Vesicular eruptions of the skin.

Carbo Veg. (*Charcoal*). Ailments arising from abuse of mercury, as in offensive breath, bleeding of the gums and canker in the mouth. Ailments arising from derangements of the digestive organs caused by eating fat meats, pork, etc., or in waterbrash, sour eructations, raising of air or bitter eructations, also in spasms of the stomach, with burning, aching, and contractive pains.

Chamomilla (*Chamomile*). Chiefly affects the stomach and the bowels, and is adapted to conditions of irritation and excitability of the nervous system. Cross, peevish; pain makes frantic; hot sweat about the head; one cheek red, the other pale; teething, with green stools; the child wants to be carried about; jerking of limbs; convulsions; inflammation of eyes after birth; colic of infants; bad effects from opium.

China (*Red Cinchona Bark*). Chiefly affects the vital powers and nervous system. Irritability and sensitiveness of the whole system; languor; inertia; heaviness of the limbs; weakness from loss of animal fluids, and in weakness after severe acute diseases. In dyspepsia, bilious and gastric affections, when there is impaired appetite with great weakness of digestion, flatulency, bitter taste in the mouth and heartburn; flatulent colic; atrophy, emaciation, particularly in children; the pains of china are darting and lacerating, or lacerating with pressure and are aggravated by contact, also at night.

Cina (*Wormseed*). In worm affections, with sleeplessness, dilated pupils; picking, and disposition to bore in the nose; stoppage of the nose; paleness of the face; hollow-eyed, or dark streaks beneath the eyes, circumscribed flush of the cheek; loss of appetite or voraciousness; nocturnal incontinence of urine, bloated abdomen.

Cocculus (*Indian Cockle*). Chiefly affects the brain and spinal nerves. Gastric and bilious affections; vomiting and nausea, from riding in the cars, carriage or on the sea. Constrictive, spasmodic pains in the abdomen, relieved by emission of wind, as in colic and cramps of the stomach; nervous weakness; fainting fits; emaciation and general weaknesses; difficult and painful menstruation.

Coffea (*Coffee*). Chiefly affects the nervous system; is useful in ailments characterized by excessive nervous excitability as in nervous headache, sleeplessness, also sleeplessness of infants; mental fatigue and nervous excitement; excessive painfulness of the affected part, and great irritability of body and mind.

Colocynthis (*Wild Cucumber*). Chiefly affects the nervous system. Neuralgia with crampy pain, nausea and vomiting; colic with violent pains in the the umbilical region, causing the patient to cry out and bend double; the pain comes every few minutes and leaves the abdominal walls so sensitive that the pain is felt at every step; yellow diarrhœa, excited by eating or drinking ever so little; vomiting and diarrhœa after a fit of chagrin.

Drosera (*Sundew*). Chiefly affects the bronchia. Whooping cough; spasmodic cough.

Dulcamara (*Bitter Sweet*). Chiefly affects the skin, mucous membrane and glands. Useful in diarrhœa with Coloc. after taking cold; swelling and induration of the glands; catarrhal ailments; small, hard, dry warts; suppurating herpes or dry scaly tetter; cough with expectoration of tenacious mucous, and stitches in the side of the chest; also in ailments such as diarrhœa, headache, cough, etc., caused by cold, wet weather.

Glonoine (*Nitro Glycerine*). Sunstroke, headache, pain as if the skull was being pressed asunder; violent rush of blood to the head; throbbing in the forehead, *extending to* the nape of the neck; oppression of the chest; throbbing of the carotids; pain heat and chills down the back; numbness and weakness in the left arm and leg; vertigo when walking.

Graphites (*Black Lead*). Useful in unhealthy condition of the skin, chronic eruptions, ulcers and erysipelas, cracks and excoriations, tetter, humid and scaly, eruptions on the head, eruptions around and in the ears, discharge of blood or pus from the ear, sore, cracked and ulcerated nostrils, constipation with large and knotty stools, coexisting with a dry harsh skin.

Hepar Sulphur (*Sulphide of Calcium*). Chiefly affects the glands, mucous membranes, skin and windpipe. Ulcerations and suppurations, favoring and promoting the suppurative process, as in abscess, boils, sty, gumboil and whitlow (felon), catarrhal affections; loose cough and rattling of mucous; croup; also in chronic hoarseness; ill effects of mercury; dyspepsia and weakness of digestion in persons who have taken much mercury.

Hyoscyamus Niger (*Henbane*). Useful in convulsions, spasmodic affections and other derangements of the nervous system; sleeplessness, hydrocephalus and other affections of the brain; headache; dry spasmodic cough, particularly at night, as if occasioned by tickling of the throat, especially when lying down, with redness of the face; difficulty of breathing; spasms of the chest; wild delirium; insanity.

Ignatia Amara (*St. Ignatius Bean*). Chiefly affects the mind, brain and nervous system. Useful in hysteric affections, also convulsive and spasmodic disorders, especially when occasioned by fright or grief; nervous affections of infants; great excitability of the nervous system, pain from the least touch; headache as if a nail were driven into the head, better from eating. Trembling of the body.

Ipecacuanha. Chiefly affects the mucous membranes; useful in paroxisms of suffocation as in asthma, with feeling of constriction and rattling of mucous in the chest; whooping cough, with bluish face and accumulation of phlegm in the chest; vomiting and diarrhœa, especially in summer after unripe fruits or acids; stools fermented, like yeast, or green. Convulsions after eating oranges or raisins, pound cake, etc., profuse menstruation with constant nausea.

Lycopodium (*Wolf's Foot*). Chiefly affects the digestive organs and kidneys. All food eaten seems to be transformed into gas, which keeps up a rolling and rumbling in the bowels. Sandy, red, brick dust deposit in the urine. False membrane on the right side of the throat.

Mercurius (*Quicksilver*). Useful in ailments connected with the mucous membrane, the glands and the liver; catarrhal and inflam-

matory affections of the respiratory organs and the lungs; swelling, inflammation and suppuration of the glands; scrofulous, catarrhal, rheumatic or syphilitic sore eyes; rheumatic pains in the joints and limbs, especially at night; aching in the bones; rheumatic headache, toothache and neuralgia; emaciation; profuse perspiration at night, especially in slow fever, without affording relief.

Nux Vomica. Chiefly affects the cerebral and spinal system. Bilious affections; derangement of the stomach and bowels; paralytic or spasmodic affections from sedentary habits, the abuse of ardent spirits and various forms of dissipation; gastric derangement during pregnancy, and complaints arising from chagrin or anger; piles; nervous prostration, caused by mental exertion and overwork; constipation and piles.

Opium. Chiefly affects the nervous system and greatly stimulates the brain. This remedy is frequently suitable to drunkards and old people and to persons on whom other medicines are slow to act. Dreamy, stupid, sleeeplessness, consequence of fright; trembling, jerking, convulsions, beginning with rigidity of the whole body; loud cries; epilepsy; tetanus; painter's colic and paralysis; delirium tremens; expectoration of frothy blood, when coughing; constipation from torpor of the bowels.

Phosphorus. Chiefly affects respiratory organs, the bronchia and cerebro-spinal system of nerves. Tuberculous affections; catarrhal difficulties; weakness from loss of animal fluids; want of vital reaction; chronic diarrhœa; pneumonia and other affections of the throat and lungs. Restless, unrefreshing sleep, with frightful dreams; hectic fever, with dry heat, especially toward evening; night sweats; violent catarrh, with hoarseness, sometimes loss of voice; cough with rawness, soreness, sore and excoriating pain in the chest.

Pulsatilla (*Pasque Flower*). Chiefly acts on the lymphatic system and nervous bloodvessels, the mucous membranes, the urinary and sexual organs, the eye and skin. Especially adapted to female derangements, and to persons of gentle disposition, easily inclined to weep, with disposition to catarrh, or leucorrhœa; chronic difficulties, arising from abuse of sulphur water, quinine, mercury; in derangements of the stomach, produced by the use of greasy food, fat pork, pastry; bad effects from fright or shame; measles and their secondary ailments; lacerating or beating headache, sometimes with vomiting; nausea, with disposition to vomit; uterine spasms, resembling labor pains; derangement and irregularity of the nausea, with severe pain, colic, nausea, vomiting and headache.

Rhus Tox (*Poison Oak*). Chiefly affects the brain and nervous system, ligaments, tendons, mucous membranes and the skin. This is a great remedy in rheumatic and arthritic affections; vesicular erysipelas; excitability and derangement of the nervous system; bad consequences from sprains or bruises, the pain is worse at night in bed, during rest, also in cold or damp weather. Typhoid and typhus fever.

Sepia (*Cuttle Fish*). Useful in affections of the skin and in female complaints; the pains are relieved by the application of warmth and usually disappear during violent exercise. Dry and itch-like eruptions; ringworm; headache, as if the eyes would fall out of the head; falling of the womb, with bearing down pain; acrid leucorrhœa, with itching and excoriation; affections during pregnancy.

Silicea. Useful in scrofulous affections of the bones, rachitis; chronic affections, from abuse of mercury; ulceration of the bones, swelling and curvature of the spine; suppurating sores of various kinds; felon; gangrenous sores; fistulas of various kinds, especially when bones are involved; glandular swelling; hard, painful, suppurating ulceration of big toes; suppression of sweat on the feet; swelling of the knee.

Spongia (*Sponge*). Chiefly affects the bronchia, that part known as the larynx; cures croup (in alternation with Aconite). Goitre, with pressure and tingling in the swelling; hoarseness after singing; hoarseness, cough and coryza; difficult respiration, as if the throat were closed, with pain in the throat and chest on coughing.

Sulphur. Chiefly affects the skin, and to a great extent the whole organism, rendering it susceptible to the action of other remedies. Is especially indicated if the patient has been troubled with boils or any form of suppurative disease. It is the chief remedy for herpes and eruptions of various kinds; rough and chapped skin; warts; hepatic spots; ulcers; felons; boils; intolerable itching; continually recurring erysipelas; inflammation and swelling of bones; piles; dysenteric stools, with violent tenesmus; diarrhœa in the morning; burning in the stomach, with sour eructations; chronic constipation.

Tartar Emetic. This is an important remedy in the first stage of influenza; dry cough and affections of the chest, also in bilious affections; small pox; asphyxia of new born infants. Pustular eruptions on the whole or any part of the body; stupefying headache; with pressure above the eyes; nausea, vomiting and diarrhœa; violent oppression of the stomach; suffocative, spasmodic cough; rattling of mucous, coughing

and sneezing; difficulty of breathing, especially at night; palpitation of the heart and oppression of the chest.

Veratrum Album (*White Hellebore*). Acts chiefly on the brain and intestinal canal. Cholera; cramps in the limbs and bowels; paralytic pain in the limbs; cramps in the calf; unquenchable thirst; sudden prostration of strength, debility and trembling, coldness, numbness, and formication of the extremities, the coldness being only external, with internal heat and violent desire for water. Cholera morbus, violent vomiting, diarrhœa, cramps.

Veratrum Viride (*American Hellebore*). Violent fever with full bounding pulse. The first stage of inflammation of the lungs, peretoneum and brain. Severe beating, pressing headache, flushed face, delirium, even convulsions, with great fullness of the pulse. Typhoid pneumonia.

MATERIA MEDICA.

Medicines, Their Preparation, Doses, Etc.

EVERY realm of nature contributes something, fraught with healing virtues, to the human race. The root, bark, leaves and flowers of plant, shrub and tree, together with the mineral and animal kingdom are all utilized in the economy of our Divine Creator, to expel disease, restore health, and prolong life in mankind. This department of "The Cottage Physician" affords ready reference to the properties, uses, and doses of the remedies now in use by the various schools. The most common name is given, followed by the scientific or botanical name in (parenthesis), where there are two or more common names, one or more will follow the (parenthesis). Some of the more valuable plants are faithfully represented by illustrations which were engraved for the work from photographs of the actual plants, which will enable the reader to recognize them at sight.

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A few words about gathering and preserving medicinal roots, herbs, barks, etc., may be useful.

All Plants (as a rule) whose leaves or stems are to be employed, should be gathered when in their fullest vigor, which is about the time of flowering. They should be dried in the shade as quickly as possible. and kept in a dry place carefully protected from insects.

Flowers should be collected just before fully expanded.

Seeds and Fruits when fully ripe.

Roots of Annual Plants just before they bloom.

Biennials after their first year's growth has ceased.

Perennials in the autumn.

Barks should be gathered either in autumn or early spring, before the season's growth has begun.

Roots and Barks may be dried in the sun without injury.

Decoctions are made by boiling the medicinal properties in water.

Infusions by pouring on boiling water and allowed to cool. Sometimes, as in case of wild cherry bark, it is necessary to *infuse* in cold water. The average proportion is an *ounce* of the drug to a *pint* of water.

Tinctures are made by macerating drugs in alcohol. In cases of resinous substances, strong alcohol is used, otherwise, dilute with equal quantity of water. In many cases good whiskey may be used in place of diluted alcohol. In preparing tinctures from dried roots, barks and seeds, these should first be reduced to a coarse powder by grinding or bruising in a mortar. Fresh drugs generally make the best tinctures.

Pills are made by accurately weighing the substances to be used, and then mixing them with water, alcohol, syrup, bread, molasses or some other mild substance. The mass after having been thoroughly mixed should be rolled into a long stick and then cut off into equal portions, according to number of pills required. Each pill should be rolled into round shape with thumb and finger.

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Absinthe (*Artemisia Absinthium*) WORMWOOD. See illustration, Wormwood, page 522.

Acid, Carbolic. Made from coal tar, the odor and taste resembles creosote. Is sometimes given internally, but generally employed externally. When diluted with water it forms a splendid application for wounds. An excellent disinfectant and aids in healing. Much used in *skin diseases* of a parisitic nature.

Acid, Carbonic. Dissolved in water forms the so called "plain soda," is useful as a refrigerant drink, quieting to an irritated stomach.

Acid, Citric. Prepared from lemon juice. Often used in the treatment of scurvy.

Acid, Gallic. A powerful astringent. Much used to check passive hemorrhages of the nose, lungs, stomach and womb. Dose five to twenty grains.

Acid, Muriatic, (*Hydrochloric Acid*). Sometimes used as a caustic. In *dyspepsia* characterized by sour stomach, this acid can be used with good effect, take ten to fifteen drops in a wineglass full of water, after meals. Is also used in low *fevers*. Dose three to five drops; given in water every two or three hours.

Acid, Nitric, (*Aqua Fortis*). Often used as a caustic, when diluted is used for the same purpose as muriatic acid. Has been used successfully in diseases of the liver.

Acid, Oxalic. Seldom used medicinally, closely resembles *Epsom Salts*. Very poisonous.

Acid, Sulphuric, (*Oil of Vitrol*). Sometimes used as a caustic.

Acid, Tannic, (*Tannin*). Obtained from nutgalls. A most powerful vegetable astringent.

Acid, Tartaric. Used in the preparation of *Seidlitz powders*. Also in inflammatory affections, fevers and scurvy.

Aconite (*Aconitum Napellus*) MONKSHOOD. See illustration, page 512. Leaves and root are used. In the formation of acute inflammations, such as *quinsy*, *pneumonia*, *pleurisy*, *rheumatism*, *erysipelas*, aconite is of great value. A tincture made from the root is the best way to prepare for ordinary use. In ordinary cases one or two drops may be given every hour or two, until the pulse is lowered and sweating produced. This remedy has become very popular and is extensively used by all physicians. For breaking up colds and fevers it probably has no superior.

Agrimony (*Agrimonia Eupatoria*). Possesses mild, astringent, qualities. Both leaves and root are used. A cupful of the decoction taken two or three times daily, produces a relaxation of the bowels. Useful also as a gargle for sore throat.

Alcohol (*Spirit of Wine*). The result of the fermentation of many vegetables. A wonderful preservative agent. Used in the preparation of tinctures of substances containing a large proportion of resinous properties. Good whiskey which contains fifty per cent. alcohol, is often used instead of diluted alcohol.

Ailanthus (*Ailanthus Glandulosa*) CHINESE TREE OF HEAVEN. Prepared in decoction, infusion, or tincture. Useful in atonic dyspepsia, loss of appetite, etc.

Alkekenge (*Physalis Alkekengi*) WINTER CHERRY, STRAWBERRY TOMATO. Diuretic and tonic. Useful in jaundice, gravel and dropsy.

Allspice (*Eugenia Pimenta*). Aromatic, stimulating, often used to relieve flatulence.

Almond Sweet (*Amygdala Dulcis*). The pulp is sometimes used in place of wheat flour, in the preparation of bread for persons suffering from *diabetes*. Bitter almonds are very poisonous.



GOLDEN SEAL.

YELLOW PUCCOON, GROUND RASPBERRY, TURMERIE ROOT.

A perennial plant, growing throughout the U. S. and Canada. The root is the medicinal part. It is a tonic, having especial action upon diseased mucous tissues, and is particularly beneficial during recovery from exhausting diseases. It is used in dyspepsia, chronic affections of the nervous coats of the stomach, erysipelas, and remittent, intermittent, and typhoid fevers. With geranium or cranebill, it produces good results in chronic diarrhœa and dysentery.

Dose.—Of the powder from ten to thirty grains; of the tincture, from one to two fluid drams.



SCULLCAP.

BLUE SCULLCAP, MAD DOG WEED, SIDE FLOWERING SCULLCAP, AND HOOD-WORT.

An indigenous herb. The whole plant is used. It is a valuable nervine, tonic, and antispasmodic; it gives support to the nerves, and imparts strength and quietness to the whole system, and does not, like some nervines, leave the patient excited and irritable. It is used in neuralgia, chorea, convulsions, lockjaw, and most other diseases of the nervous system.

Dose.—Fluid extract, from half to a spoonful; tincture, four ounces to a pint of diluted alcohol, one to two teaspoonsfuls; infusion, a wineglassful, three times a day.



YELLOW DOCK.

Yellow Dock is an alterative, tonic and detergent, and is very valuable in scorbutic, cutaneous, scrofulous and syphilitic affections, and all impurities of the blood. The root is used.



POISON HEMLOCK.

The seeds and leaves are used. It is anodyne, narcotic, antispasmodic and deobstruent, and is used in chronic rheumatism, neuralgia, asthma, syphiles, &c.

Aloes (*Aloe Vulgaris*). An excellent purgative, does not produce watery stools, nor create wind in the bowels, rarely disagrees with the stomach. In small doses assists digestion. Often used in cases of habitual costiveness in connection with indigestion. Aloes act principally on the lower intestines and will irritate if given too frequently or in too large doses. Should not be used in cases of piles, except in very small doses, nor when there is inflammation in the bowels and should be carefully avoided by females who are subject to immoderate flowing of the menses, and carefully avoided during pregnancy.

Alum. Astringent. Useful in checking the flow of blood from the *nose, gums*, after extraction of teeth, slight wounds and sometimes in cases of *piles*. In nose bleed, powder and blow into the nostrils through a quill. A solution of alum is useful in chronic discharges from the *nose, ear* and female genital organs. In these cases use a teaspoonful alum to a pint of water. A gargle of alum water is beneficial in many cases of sore throat, especially when the parts are relaxed and "palate down." Burnt alum will remove proud flesh. Alum is sometimes used internally, for diarrhœa and dysentery. Two or three grains dissolved in aromatic syrup taken three or four times daily, will often do much good in the later stages of *whooping cough*. Alum is also a splendid emetic in *spasmodic croup*. Dose, teaspoonful of powdered alum mixed with same amount of molasses and water, give one-third of this quantity every three to five minutes until the desired result is produced.

Ammonia (*Hartshorn*). A gasseous body, soluble in cold water forming water ammonia (aqua ammonia). A powerful diffusible stimulant, often used to restore persons in a fainting condition. Great care should be exercised in its use.

Anise (*Pimpinella Anisum*). Very stimulating to the stomach and relieves pain in the bowels. Much used in flavoring liquids and in making cordial. A decoction is very useful, relieving colic pains in young children. Dose in powder twenty grains, oil two to four drops.

Aqua Fortis. See Acid Nitric.

Areca Nut (*Areca Catechu*) Betel-nut. Astringent. Principally used to expel *tapeworms*.

Arnica (*Arnica Montana*) Leopard's Bane. A European plant. The flowers alone are used in this country. Useful in cuts, bruises and internal injuries. An infusion or decoction of half ounce of the flower in a pint of water is the best preparation for external use. For internal injuries the tincture may be given in five or ten drop doses every two hours.



FOXGLOVE.

A biennial plant. The leaves of this, are sedative and diuretic, reducing the pulse, and increasing the urine. In large doses, they are a narcotic poison.

Dose.—Of the powdered leaves of foxglove, from one to three grains; of the tincture, from eight to twelve drops.



VIRGINIA SNAKE ROOT.

A perennial herb of the Middle and Southern States. The root is stimulant, tonic, and diaphoretic. It is used in typhoid fevers when the system needs support, but cannot bear active stimulation. Combined with Peruvian bark, it is also used in intermittent fevers. An infusion is employed in dyspepsia; and as a gargle in malignant sore throat.



WILD INDIGO.

RATTLE BUSH, HORSE FLY WEED.

This shrub grows in most parts of the U. S. The bark of the root is purgative, emetic, stimulant, astringent, and antiseptic. It is chiefly used for its antiseptic properties. For external use, it is valuable as a wash or gargle for all kinds of sores and ulcerations. The decoction is made by putting one ounce of powdered bark into two pints of water and boiling till reduced to one pint.

Dose.—One tablespoonful every two or four hours as required.



STAR GRASS.

COLIC WEED, AGUE ROOT, CROW CORN, UNICORN ROOT.

The root is the part used, and in decoction or tincture is of great utility in dyspepsia, general and local debility, flatulent colic, hysteria, etc. It greatly strengthens the female generative organs, and affords protection against miscarriage.

Dose.—Of the powdered root, from five to ten grains, three times a day; of the saturated tincture five to fifteen drops.

Arrow Root (*Maranta Arundinacea*). Often used as an article of diet for invalids. Take a tablespoonful, add water enough to form a paste then gradually add a pint of boiling milk.

Arsenic (*Arsenious Acid*). This is a powerful and poisonous substance and should be used only by the skilled physician.

Assafœtida (*Narthex Assafœtida*). A powerful stimulating antispasmodic. Often used in treating nervous diseases of females, epilepsy, St. Vitus dance, convulsions of infants, etc.

Atropine (*Atropia*). Prepared from the root of belladonna; yellowish white crystals.

Balm (*Melissa Officinalis*). Belongs to the mint family. Has a pleasant odor but possesses no decided medicinal qualities.

Balm of Gilead. A common shade tree. The buds in the spring are covered with a resinous substance from which an ointment is prepared, useful for burns, bruises, etc.

Balmony (*Chelone Glabra*) Snake Head. Grows freely in swampy places. Leaves are bitter and said to be tonic and to act upon the liver.

Balsam of Peru. Applied externally as a stimulant for ulcers, etc.

Balsam of Tolu. A stimulating expectorant, agreeable flavor and much used in cough mixtures.

Baneberry (*Actœa Spicata*). Medicinal properties very similar to *Black Cohosh.*

Barberry (*Barberis Vulgaris*). Native of Europe but now grows in the United States. The bark of the root is generally used. In small doses it acts as a tonic, large cathartic.

Bayberry (*Myrica Cirifera*) Wax Myrtle. See illustration, page 518.

Bearberry (*Arctostaphylos Uva-Ursi*). See illustration, page 524.

Belladonna (*Atropa Belladonna*) Deadly Night-shade. See illustration, page 520.

Birch Bark (*Betula Alba*). A decoction of the bark and twigs are often used in treating *skin* diseases, *rheumatism*, *gout* and disorders of the *bladder.*

Bitter Root (*Apocynum Cannabinum*) Indian Hemp. See illustration, page 514.

Blackberry (*Rubus Villosus*) Dewberry. The root acts pleasantly upon the bowels, as in cases of diarrhœa, dysentery and in summer



POKE.

PIGEON-BERRY, GARGET, SEOKE, COAKUM, ETC.

This plant is common in most parts of the country. Poke is emetic, cathartic, alterative and slightly narcotic. The root excites the whole glandular system, and is very useful in syphilitic, scrofulous, rhumatic, and cutaneous diseases. It is an excellent remedy for the removal of mercurio-syphilitic affections.

Dose.—Of the powdered root, as an emetic, twelve grains to half a dram; as an alterative, from two to six grains.



MONKSHOOD.

WOLFSBANE.

This is a perennial herb. All parts of the plant contain powerfully poisonous properties; but the root is the part most generally employed for medical purposes.

Dose.—Fluid extract, dose, two to six drops; solid extract, dose, one quarter of a grain to a grain; tincture, eight ounces of the root to a pint of alcohol; dose, three to eight drops.



BLUE FLAG.

A perennial plant, growing in damp places throughout the United States. The root is the part used for medicinal purposes. It is cathartic, alterative, sialagogue, and diuretic. It acts particularly on the glandular system; in large doses, it evacuates and exhausts the system, acting on the liver, and fulfilling the purposes of mercury.

Dose.—Powdered root, five to ten grains; Iridin, one grain.



PIPSISSEWA.

WINTERGREEN, PRINCES PINE, GROUND HOLLY.

A small evergreen growing in the U. S. and other countries. The whole plant is tonic, diuretic, and astringent, and has proved itself useful in dropsy, general debility, rheumatism, chronic disorders of the kidneys, bladder, urethra, etc.

Dose.—Of the infusion, two ounces.

complaint of children. To prepare, take a heaping tablespoonful of small roots, or both of the large ones, to one and one-half pints water, boil down to one pint. Dose two tablespoonfulls three times per day.

Black Cohosh (*Cimicifuga Racemosa*) BLACK SNAKE ROOT. See illustration page 522.

Black Oak Bark (*Quercus Tinctoria*). The species termed white and black oak are the kinds used. White is preferable, when administered internally being milder, and less acute than the black. The bark is often used in cases of *fever* and *ague*, obstinate, chronic diarrhœa and hemorrhage of the lungs. The acorns roasted and made into a coffee is good for scrofula in its early stages.

Blood Root (*Sanguinaria Canadensis*). See illustration, page 516.

Blue Flag (*Iris Versicolor*). See illustration, page 512.

Boneset (*Eupatorium Perfoliatum*) THOROUGHWORT. See illustration, page 514.

Buckthorn (*Rhamnus Frangula*). The bark possesses cathartic properties resembling rhubarb, but more severe.

Bugle Weed (*Lycopus Virginicus*) WATER HOREHOUND. See illustration, page 520.

Burdock (*Laffa Minor*). The root is the medical portion. Prepared in the form of tea, take a handful of the freshly bruised root to three pints of water, boil to two pints. It acts upon the skin and moderately upon the bowels. When all other medicines fail, this will sometimes cure skin diseases and scrofulous conditions of the system. Burdock is a splendid purifier of the blood.

Butternut (*Juglans Cinerea*). Inner bark mildly cathartic, often used in cases of habitual constipation. Prepare in form of a decoction.

Caffeine, Caffeina or Caffeia. Much used in nervous diseases such as spasmodic asthma, nervous headache, etc.

Calamus (*Acorus Calamus*) SWEET FLAG. The root is the part used, and abounds in low and swampy places. It is widely known by by its pungent, aromatic taste. Is especially good in relieving pain or uneasiness of the stomach and bowels, and where there is weakness of these organs.

Calomel. See mercury, mild chloride of.

Camphor (*Camphora Officinorum*). The camphor tree is found in the *East Indies*. Physicians differ as to the medical action and value of camphor. Some ignore it entirely while others esteem it highly. It



BLUE COHOSH.

PAPOOSE ROOT, SQUAW ROOT.

A perennial plant growing in all parts of the U. S. The root is the part used. It is antispasmodic, diuretic, diaphoretic, alterative, emmenagogue, anthelmintic, parturient and tonic. It is used in rheumatism, dropsy, epilepsy, hysterics, cramps, amenorrhœa, dysmenorrhœa, chorea, leucorrhœa, hiccough, to hasten delivery, and to relieve after-pains.

DOSE.—Of the infusion, one to four fluid ounces three or four times a day.



STONEROOT.

HEALALL, HARDHACK, HORSEWEED, RICHWEED, OXBALM.

This plant is common in the U. S. It is tonic and astringent, and is very valuable in whites, chronic diarrhœa, cholera infantum, etc. It agrees well with the stomach, and is a good remedy in summer complaints of children.

DOSE.—Fluid extract, four to twenty drops. It is much used in the form of infusion. The green herb boiled in milk is a valuable remedy in chronic diarrhœa, when attended with much debility.



BONESET.

THROUGHWORT.

Grows on low grounds throughout the U. S. The cold infusion or extract is tonic and aperient; the warm infusion, diaphoretic and emetic. As a tonic it is useful in remittent, intermittent and typhoid fevers, dyspepsia and general debility.

DOSE.—Of the powder, ten to twenty grains; of the extract, from two to four grains; of the infusion, from two to four wineglassfuls.



BITTER-ROOT.

DOG'S BANE, MILK WEED.

A plant growing in the United States and Canada. The root is the part used, and is laxative, tonic, diaphoretic, and alterative. It is used in chronic affections of the liver, syphilis, scrofula, intermittents, and the low stage of typhoid fevers. Forty to sixty grains will cause vomiting without much nausea.

DOSE.—Solid extract, two to eight grains; tincture, two to three drams; infusion, a wineglassful three times a day.

is certain however that camphor exerts a quieting influence upon a disordered nervous system. Is often used successfully in cases of diarrhœa of children. It is also used in external applications of *bruises* and *sprains*, but *Arnica* is better.

Caraway, Seeds of (*Carum Carui*). Native of Europe, but now grows abundantly in the United States. A pleasant aromatic and carminative.

Carrot (*Daucu Carota*). The seeds and root of the wild plant are moderately excitant and diuretic, sometimes used in dropsy and chronic kidney troubles.

Castor Oil (*Ricinus Communis*). The plant is a native of Europe, but now cultivated in this country.

In the commencement of diarrhœa when there is reason to suppose that it is being caused by indigestible food, castor oil should always be given. If there is much griping add a little laudanum or paregoric to it. There is no better laxative than castor oil for children, and for females during pregnancy and after delivery. Various plans can be adopted to cover up its nauseous taste.

Catnep (*Nepeta Cataria*) **Catmint.** Stimulating and slightly tonic. Much used in the flatulent colic of infants.

Cayenne Pepper (*Capsicum Fostigiatum*). Used more as a condiment than as a medicine. It promotes digestion and prevents flatulence. Taken freely it sometimes cures piles. In obstinate cases of chills and fever it adds to the efficiency of quinine. It forms a splendid gargle for malignant sore throat, and also for sore throat with relaxation of the palate.

Centaury, American, (*Sabbatia Angularis*). A beautiful native plant of the United States, all parts of it are bitter. A cold infusion is beneficial in debilitated conditions of the stomach, and has been successfully used as a tonic in fevers.

Cerium, Oxalate of. Used chiefly to relieve vomiting in pregnancy.

Chalk, Prepared. Used principally in medicine for the purpose of checking purging, from acidity of the stomach and bowels. It is mild in action and suited to children.

Chamomile Flowers (*Anthemis Nobilis*). A cold chamomile tea is a splendid remedy for heartburn, flatulency, loss of appetite, and other symptoms of indigestion. Cold infusion, which is the most agreeable form to use as a tonic, is made with half ounce of the flowers to a



BLOOD-ROOT OR RED PUCCOON.

It grows throughout the United States in rich soils. In small doses it stimulates the digestive organs, acting as a stimulant and tonic. In large doses it is an arterial sedative. It is useful in bronchitis, laryngitis, whooping cough, and other affections of the respiratory organs. It excites the energies of a torpid liver, and has proved beneficial in scrofula, amenbrohata and dysentery. Applied to fungous growths, ulcers, fleshy excrescences, cancerous affections, the powder acts as an escharotic, and the infusion is often applied with benefit to skin diseases.

Dose.—Of the powder as an emetic, ten to twenty grains; as a stimulate and expectorate, three to five grains; as an alterative, half a grain to two grains. Tincture, twenty to sixty drops.



PINK ROOT.

CAROLINA PINK OR WORM GRASS.

This perennial herb grows in rich soils in the Southern States. The root is the medicinal part. It is a powerful vermifuge.

Dose.—Fluid extract of Pink Root and Senna, dose half a dram to a dram. Infusion, half ounce to a pint of water, dose two to six ounces.



PENNYROYAL.

An indigenous annual plant. It is a gently stimulant aromatic; it relieves wind colic and sick stomach, and when given as a warm infusion it promotes perspiration and excites the menses. In recent suppression, it may be given at bed-time as a warm tea, first bathing the feet in warm water. The oil of pennyroyal has the properties of the herb.



SLIPPERY ELM.

The inner bark of this tree is nutritive, demulcent, emollient, and diuretic. It makes a valuable demulcent drink in inflammations of the lungs, stomach, bowels, bladder, and kidneys; also, for coughs, strangury, dysentery, and the summer complaints of infants. It also makes a valuable poultice.

pint of cold water. If preferred warm, care should be exercised in preparing not to allow the flowers to remain in the water longer than ten minutes.

Charcoal (*Carbo Ligni*). Wood charcoal, finely powdered and taken into the stomach, absorbs the gasses, and is of great value for dyspepsia, characterized by flatulence. Dose, one to two tablespoonfuls. The powder is frequently mixed with flaxseed poultices and applied to gangrenous sores with cleansing results. Foul water may be rendered pure by filtering through charcoal.

Chestnut Leaves (*Castanea Vesca*). Made into an infusion is much used for whooping cough.

Chiccory (*Chicorium Intybus*). Medicinally used has a similar effect to dandelion. Much cheap ground coffee is adulterated with chiccory.

Chloral, Hydrate of. This is a medicine of recent discovery, and is popular as a quieting agent. Like opium it quiets pain and produces sleep, and is not attended with unpleasant after effects. In cases of nervousness, from care, anxiety, or pain of no violent character, a small dose of chloral may be taken with almost absolute certainty of sleep, rest and refreshment. Dose for an adult, ten to thirty grains. It has also been used successfuly in cases of *delirium tremens*.

Chlorate of Potash. See Potash.

Cinchona Bark (*Cinchona Flava*). This bark was formally given in substance, but this practice became obsolete with the discovery of the alkaloids to which it owes its medicinal effects, chief among which is quinine. It is well known that quinine is one of the very best of all the vegetable tonics. No other medicine compares with it for controlling *intermittent fevers*. It also has a wonderful power of reducing the temperature of acute diseases when dangerously high. Some persons are prejudiced against quinine, but their prejudice is without substantial foundation. In *pneumonia*, *pleurisy*, all the fevers, *diphtheria*, *rheumatism*, *erysipelas*, *dysentery*, etc., etc., quinine is one of the most reliable agents in supporting the patient. When taken as a tonic, one to three grains is a dose. Intermittent fever, or neuralgia of a periodical type, take from five to ten grains, three to four times per day, one of the doses being taken an hour before an anticipated chill.

Cinnamon (*Cinnamomum Aromaticum*). Seldom given alone, but is much used with other remedies, on account of its aromatic and stimulating qualities. Three or four drops of the oil of cinnamon on a lump of sugar will often relieve pains in the stomach and flatulent colic.



BAYBERRY.

WAX MYRTLE.

This shrub is found in woods and fields from Canada to Florida. The bark of the root is the medicinal part. It is astringent and stimulant. Pulverized and combined with powdered blood-root, it forms an excellent application to indolent ulcers. In the form of poultice, combined with powdered slippery elm, it is a valuable application to scrofulous tumors or ulcers. The decoction is a good wash for sore mouth, and spongy, bleeding gums. It is chiefly used in the form of tincture.

DOSE.—Tincture half an ounce; fluid extract, one to two drams.



MEADOW CABBAGE.

SKUNK CABBAGE, SKUNK WEED, POLE CAT WEED.

A perennial plant, growing in moist places throughout the U. S. The root is stimulant, expectoraut, antispasmodic, and slightly narcotic. It is given for pulmonary and bronchial affections, epilepsy, hysterics, asthma, hooping-cough, and irritable nerves.

DOSE.—Fluid extract. twenty to eighty rops; tincture, three ounces to a pint of alcohol; half a dram to a dram; infusion, one to two ounces; syrup, two to three drams.



DOGWOOD.

BOXWOOD, FLOWERING CORNEL, GREEN OZIER.

This is a small tree growing in various parts of the United States. The bark is used as a medicine. It is tonic, astringent, antiperiodic, and stimulant. It increases the pulse, and raises the temperature of the body. It has been substituted for peruvian bark in intermittent fevers.

DOSE.—Of the powdered bark, from ten to sixty grains.



GINSENG.

A plant growing in the Middle and Southern States. It is a mild tonic and stimulant, it is useful for poor appetite, nervous debility, weak stomach, etc.

DOSE.—Of the powdered root, from ten to sixty grains; of the infusion, from two to four fluid ounces.

Cloves (*Caryophyllus Aromaticus*). Stimulating and often used to relieve colic and expel wind. The oil of cloves is often used locally to relieve *toothache* and *earache*.

Cod-Liver Oil (*Oleum Morrhuæ*). Obtained from the livers of the common cod-fish. There are three varieties according to mode of extraction, known as *pale*, *light brown* and *dark brown*. The first named is the purest and most palatable; as a remedy for consumption and other constitutional diseases of an exhausting nature, cod-liver oil takes high rank. It is really more of a food than a remedy, its power of producing fat is well known. In scrofulous diseases generally, *hip-joint* diseases, *white swelling of the knee*, *caries of the spine*, *lumbar* and *psoas abscesses*, *rickets*, etc., cod-liver oil will nearly always do good. It is also useful in *skin diseases*, some forms of *eye troubles* and *syphilis*. Young children who have grown very weak from diarrhœa in summer, and who seem unable to assimilate the food given them, can often be saved by rubbing cod-liver oil into their skin. Common dose of cod-liver oil is from one to two tablespoonfuls, three times daily.

Coltsfoot (*Tussilago Farfara*). Native of Europe, now naturalized in the United States. Useful in *chronic bronchitis* as a demulcent and expectorant. Given in infusion, one ounce of dried leaves to a pint of boiling water.

Compound Spirit of Ether (*Hoffmann's Anodyne*). Stimulant and anti-spasmodic, very useful in *hysterical paroxysms*.

Copperas. See Iron, Sulphate of.

Cranesbill (*Geranium Maculatum*) Spotted Geranium. See illustration, page 526.

Creasote. Sometimes used internally to check vomiting. *Sea-sickness* and *cholera infantum* frequently yield to its influence. Dose, one or two drops. In an overdose it is a violent poison. When applied to the cavities of decayed teeth it will often relieve the pain.

Cubebs (*Cubeba Officinalis*). Chiefly used in inflammation of the urinary passages. It is also used in cases of *chronic bronchitis*, catarrh, and in certain throat troubles.

Dandelion (*Taraxacum Dens-leonis*). Has long been used for *dyspepsia* associated with congestion of the liver. Fluid extract is probably the best form of preparation.

Dogwood (*Cornus Florida*). See illustration, page 518.

Dover's Powder. This powder is composed of one grain opium, one grain ipecac., and eight grains sulphate of potash.



PLEURISY ROOT.

BUTTERFLY WEED, WIND ROOT, TUBER ROOT.

An indigenious plant. The root is the medicinal part. It is of great value in uterine difficulties. It's chief value is in bronchial and pulmonary complaints.

Dose.—Of the Powder twenty to sixty grains, three or four times a day. Of Tincture one or two wine glasses full four or five times a day until perspiration is produced.



HENBANE.

This plant is narcotic, gently accelerating the circulation, increasing the general warmth, causing a sense of heat in the throat, and after a time inducing sleep. It is often used in the place of opium; it does not produce constipation. It is used in rheumatism, gout, bronchitis, asthma, consumption, hooping-cough, hysterics, and spasmodic affections.



DEADLY NIGHTSHADE.

BELLADONNA, DEWALE, BLACK CHERRY, ETC.

A perennial plant, growing in Europe and this country, it has a faint odor, and a sweet, nauseous taste. It is narcotic, diaphoretic, and diuretic, and is a valuable remedy in convulsions, neuralgia, rheumatism, gout, paralysis, and many diseases having their seat in the nervous system. It is used as a preventive of scarlet fever and as a cure for hooping-cough.



BUGLEWEED.

WATER HOREHOUND.

The whole herb is used. It is a mild narcotic, sedative, sub-astringent, and styptic. It is a valusble remedy in bleeding from the lungs, incipient consumption, and pneumonia. It quiets irritation, and allays cough, and nervous excitement.

Dose,—Fluid extract, one to two drams; infusion, two to four ounces.

This celebrated powder was introduced by Dr. Dover, during the reign of Geo. II. While under the influence of this powder, the patient should remain in bed, and as soon as perspiration begins drink freely of barley water, toast water flavored with lemon peel or any other mild drink; this is to keep up the discharge from the skin.

Elderberries and Bark (*Sambucus Canadensis*). The medicinal virtue is found in the flowers, berries and inner or second bark of the branches and roots. An ointment made by stirring the fresh flowers or inner bark into clean melted lard, then strained, has a high reputation for slight burns, scalds, wounds and in dressing old sores. The berries are rather laxative and also act upon the skin. They are often used in treating *rheumatism*, *gout*, *scrofula* and habitual constipation.

Elecampane (*Inula Helenium*). Useful in many chronic diseases, *bronchitis*, dyspepsia, etc., and in some forms of skin diseases.

Epsom Salts. See Magnesia, Sulphate of.

Fennel Seed (*Fœniculum Vulgare*). A pleasant aromatic, frequently used to reduce the harsh and griping operations of other medicines.

Feverfew (*Pyrethium Parthenium*). A bitter tonic, very similar to chamomile in its action, and often used for the same purpose.

Fever-Root (*Troisteum Perfoliatum*) Tinker-Weed, Wild Ipecac. A good cathartic, acts much like jalap. Large doses emetic. The dried root impaired by age.

Fig (*Ficus Passa*). Slightly laxative.

Flaxseed (*Linum Usitatissimum*). Often used in the form of poultices. Infusion used as a demulcent.

Fleabane (*Erigeron Canadense*) Horseweed, Stoneroot. See illustration, page 514.

Foxglove (*Digitalis Purpuera*) Digitalis. See illustration, page 510.

Garlic (*Allium Sativum*). The Gallic leek and onion all possess similar qualities. Stimulating when applied to the skin. Their odor is both stimulant and anti-spasmodic. Useful in *hysterical* paroxisms and catarrhal troubles of children.

Germander (*Teucrium Canadense*) Woodsage. Tonic, stimulant, diaphoretic, diuretic. The infusion is used in *bronchitis*, *leucorrhœa* and amenorrhœa.

Ginger (*Zingiber Officinale*). An excellent stimulant and carminative. Much used in dyspepsia, flatulence, and to correct other medicines.



WITCH HAZEL.

WINTERBLOOM, SNAPPING HAZEL NUT, SPOTTED ALDER.

This shrub grows in damp woods in most parts of the U. S. The bark and leaves are tonic, astringent, and sedative. A decoction of the bark is very useful in bleeding from the lungs and stomach, and in diarrhœa, dysentery, and excessive mucous discharges. It is also used in incipient consumption, and for sore mouth, etc.

Dose.—Of the decoction, a wineglassful to a teacupful three or four times a day.



LOBELIA.

INDIAN TOBACCO, WILD TOBACCO.

This plant grows in nearly all parts of the U. S.; both its seeds and leaves are used in medicine. It is emetic, expectorant, sedative, and antispasmodic. As an emetic it is generally used in combination with other articles. It is of great advantage in spasmodic asthma, as well as in bronchitis, croup, hooping-cough, and other throat and chest affections. A poultice of lobelia, elm bark, with weak lye, relieves sprains, bruises, rheumatic pains, erysipelatous inflammations, and poison from ivy or dogwood.



BLACK COHOSH.

RATTLEROOT, SQUAW ROOT. BLACK SNAKE ROOT.

A native of the U. S. The root is the medicinal part. It is narcotic, sedative, antispasmodic. It is useful in cholera, fits, epilepsy, nervousness and many spasmodic affections. It is also valuable in menstrual and uterine affections.

Dose.—Fluid extract one half a dram to two drams; solid extract, four to eight grains; of the tincture, from one to three teaspoonsful.



WORMWOOD.

A perennial plant growing nearly over the whole world. The tops and leaves are tonic and anthelmintic; used in intermittent fever, jaundice, and worms. It restores the appetite and is also useful in amenorrhœa. It is excellent applied as a tincture, or as a fomentation, to bruises, sprains, and local inflammations.

Dose.—Of the powder, ten to twenty grains; infusion, one or two ounces.

Ginseng (*Aralia Quinquefolia*). See illustration, page 518.

Glycerine. Often used in mixing medicines where it is not desirable to employ syrups or sugar. Externally applied in skin diseases, alone or with *carbolic acid, tannin, gallic acid, starch,* etc. Many other uses readily suggest themselves.

Golden-Rod (*Solidago Odora*). The golden-rod family is a numerous one, and nearly all of the species have a disagreeable odor. The above mentioned is the only one entitled to the name "sweet scented." It is a pleasant aromatic and carminative.

Golden Seal (*Hydrastis Canadensis*) ORANGE ROOT, YELLOW ROOT, YELLOW PUCCOON. See illustration, page 508.

Grindelia (*Grindelia Robusta*). A splendid remedy for *whooping cough, bronchitis* and asthma. The fluid extract is perhaps the best form to use it. Dose from ten to thirty drops every two or three hours.

Ground Ivy (*Nepeta Glechoma*). Used in *chronic bronchitis, catarrh of the bladder,* and in some cases of *dyspepsia.* Infusion may be given in doses of a wineglassful.

Ground Laurel. See May Flower.

Guarana (*Paullinia Gorbilis*). Very useful in cases of *nervous headache.* Dose of the powder, fifteen to fifty grains.

Gum Arabic (*Acacia Vera*). Dissolved in water it makes a common demulcent drink; it is also used in the composition of various mixtures and lozenges used to allay coughing.

Hardhack Root (*Spiræa Tomentosa*) MEADOW SWEET. The root, leaves and bark are all tonic and astringent. Used in *diarrhœa, cholera infantum, dyspepsia,* etc. A decoction is made by boiling an ounce of the root, leaves or bark in a pint of water. Dose two ounces, three times daily. See illustration, page 514.

Hellebore, Black, (*Helleborus Niger*) CHRISTMAS ROSE. A powerful cathartic. Used in dropsy, also in promoting the monthly discharge of females for which it is highly esteemed. It is sometimes used in *brain* and *skin* diseases. Dose five to fifteen grains of the powder, decoction, one ounce every two or three hours, until it operates.

Hemlock, Poison, (*Conium Maculatum*). See illustration, page 508.

Henbane (*Hyoscyamus Niger*). See illustration, page 520.

Hops (*Humulus Lupulus*). The fruit of the hop vine is sprinkled over with a yellow powder, which is called *lupulin,* to which belong all the medicinal qualities of the hops. Lupulin is tonic and narcotic. It



LADIES' SLIPPER.

AMERICAN VALERIAN, UMBEL NERVE ROOT, YELLOW MOCCASIN FLOWER, NOAH'S ARK.

The fibrous roots are the parts used in medicine. It is tonic, nervine, and antispasmodic and is employed in nervous headache, and other nervous affections, as excitability, hysterics, neuralgia, etc.

Dose.—Fluid extract, half a dram to a dram; solid extract, five to fifteen grains; tincture, two ounces to a pint of diluted alcohol, half an ounce to an ounce. Take this preparation for producing sleep in wakeful and nervous conditions: fluid extract ladies slipper, one ounce; fluid extract pleurisy root, one ounce; fluid extract skunk cabbage, one ounce; fluid extract scullcap, one ounce; mix; take half a dram to a dram, three times a day. For sick and nervous headache, caused by acid stomach, use the following; fluid extract ladies, slipper, half an ounce; fluid extract catnip, half an ounce; fluid extract scullcap, half an ounce, water, one pint; mix; dose, one and a halt to three drams.



BEAR-BERRY.

THE UPLAND CRANBERRY.

The leaves are the medicinal parts. It is astringent and tonic, and acts particularly upon the urinary organs, for complaints of which it is particulary used. It is specially valued as an antilithic in gravel, and as a remedy for chronic inflammation of the kidneys, and ulceration of the bladder, etc.

Dose.—Fluid extract, one third of a dram to a dram; solid extract, five to fifteen grains; tincture, one to two ounces.



PRICKLEY ASH.

YELLOW WOOD, TOOTHACHE BUSH, ETC.

The bark and berries are used. The bark is stimulant, tonic, alterative, and sialagogue. It is used to excite and stimulate the system, when in a languid state, and for derangements of the liver, rheumatism, and chronic syphilis. It strengthens mucous membranes, and is a useful tonic in low typhoid fever. Applied externally, it improves indolent and malignant ulcers.

Dose.—Of the powdered bark, from ten to thirty grains, three times a day.

The berries are carminative, antispasmodic, and stimulant. The tincture is valuable in nervous diseases, spasms of the bowels, flatulency, and diarrhœa; and combined with the tincture of poke berries, is very useful in chronic rheumatism and syphilis. It has been used with great success in Asiatic cholera.

Dose.—Of the tincture, from ten drops to a fluid dram, in sweetened water; of the oil of prickly ash berries, from two to ten drops, on sugar.



MARSHMALLOW.

A European perennial plant. The root is used. A decoction is found useful in inflammation of the bladder, lungs, bowels and stomach, also in kidney diseases.

is often used to control the *nocturnal pains of gonorrhœa*, and for checking *nocturnal seminal emissions* and *incontinence of urine*. Dose five to ten grains or more. A tincture is also employed. Hop fermentations, hop pillows, etc., are too common to require further mention.

Horehound (*Marrubium Vulgare*). A stimulant, expectorant and carminative. Much used in cases of *dyspepsia, chronic bronchitis* and many other diseases. Given generally in infusion.

Horse-Balm (*Collinsonia Canadensis*) STONE-ROOT. See illustration, page 514.

Hyssop (*Hyssopus Officinalis*). Tonic and carminative. Used in *dyspepsia, chronic bronchitis*, scanty menstruation and is also applied externally to bruises and muscular rheumatism. Infusion made with a dram of the leaf to a pint of water. Dose, wineglassful.

Ipecac (*Cephælis Ipecacuanha*). The root is the part used; diaphoretic, expectorant and emetic. It is a standard medicine in the treatment of *croup*, both membranous and spasmodic. Taken in doses (one drop) it has received much praise as a remedy in vomiting of pregnancy. As an *emetic*, ipecac is one of the very best for common use.

Iron. Tonic. Of all the metals *iron* is the most useful in medicine. It is one of the natural constituents of the blood. To give a detailed description of all conditions in which iron is servicable would require many pages of this book. There are more than twenty preparations of iron, the use of which the reader is referred to some more exhaustive treatise on Materia Medica.

Jamestown Weed. See illustration, page 526.

Juniper Berries (*Juniperus Communis*). Annual plant and grows in many parts of the United States. It acts decidedly upon the kidneys and skin and is valuable in cases of suppressed urine and in gravel. Prepared in the form of a tea, take a handful of the herb, add a quart of water, boil twenty minutes. Dose, tumblerful three times a day.

Kerosene Oil. See Petroleum.

Ladies' Slipper (*Cypripedium Pubesceus*). Slightly narcotic and anti-spasmodic.

Laudanum. See Opium, Tincture of.

Lead (*Plumbum*). There are many preparations of this metal used in medicines.

Lime (*Calcium*). Like iron and lead, lime comes to us as a medicine in many forms.



CRANESBILL.

DOVES FOOT, CROW FOOT, ALUM ROOT, SPOTTED GERANIUM.

A native plant, growing in the open woods. The root is the medicinal part. It is a powerful astringent. It forms an excellent gargle in sore throats and ulcerations of the mouth, and is valuable for treating those discharges arising from debility, after the exciting causes are removed. It is a valuable astringent wash for sore mouth, etc., and as an injection in leucorrhœa, etc., is made by uniting fluid extract of cranesbill, half an ounce; fluid extract of black cohosh, half an ounce; fluid extract of golden seal, half an ounce; fluid extract of witch-haze' half an ounce; and water, one quart.



MOUNTAIN LAUREL.

CALICO BUSH, SHEEP LAUREL, SPOONWOOD, LAMBKILL.

This plant grows on highlands in most parts of the U. S. The leaves are used in medicine, and causes, when taken in large doses, vertigo, dimness of sight, etc. In proper doses they are sedative and astringent. The saturated tincture is the best form of administration; it is given in ten to twenty drops, every two or three hours, for syphilis, active hemorrhages, hypertrophy of the heart, and jaundice.



MANDRAKE.

MAY-APPLE, WILD-LEMON, RACCOON BERRY, WILD MANDRAKE.

It is found throughout the U. S., and flowers in May and June. The root is the medicinal part. It is cathartic, alterative, anthelmintic, hydragogue, sialagogue, and, in large doses, emetic. It stimulates and quickens the action of the liver and kidneys, promotes expectoration, and determines the blood to the surface. Combined with cream of tartar it produces watery stools, and is useful in dropsy. It is used in jaundice, dysentery, diarrhœa, bilious, remittent, and intermittent fevers, puerperal fever, typhoid fever, and all glandular enlargements. But it has a more particular action upon the liver, and is especially useful in derangements of that organ.

Dose.—Of the powdered root, as a cathartic, from ten to thirty grains; of the tincture, from ten to forty drops.



JAMESTOWN WEED.

THORN APPLE, STINKWEED, APPLE-PERU, STRAMONIUM.

This well known weed grows in most parts of the U. S. The leaves and seeds are medicinal. It is a powerful narcotic; it is also antispasmodic, anodyne, and sedative. It is used in various nervous affections, as chorea, epilepsy, palsy, tetanus, and mania. It is much used for relieving acute pains, etc. Taken in large doses, it is a powerful poison.

Licorice (*Glycyrrhizu Glabra*). Excites the secretions of the throat and is therefore beneficial in *sore throat, bronchitis,* and *laryngitis*. Frequently used to cover up the taste of other medicines.

Lobelia (*Lobelia Inflata*) INDIAN TOBACCO, EMETIC HERB. See illustration, page 522.

Logwood (*Hoematoxylon Campechianum*). Pleasant astringent. Used in *chronic diarrhœa, chronic dysentery* and chronic bowel complaints of children. Decoction made of one ounce rasped logwood, two pints of water boiled to one pint. Dose for an adult, four tablespoonfuls; child, two teaspoonfuls several times daily.

Lovage (*Levisticum Officinale*). Carminative and diuretic. Useful in flatulent *dyspepsia,* suppression of the *menses* and *dropsy*. Dose, tablespoonful of the decoction.

Lunar Caustic, or Nitrate of Silver, sometimes used in cases of epilepsy, St. Vitus' dance, angina pectoris and indigestion. Sometimes it imparts a permanent purple color to the skin. Externally applied round the inflamed surface in erysipelas, has often arrested the progress of the disease.

Mandrake (*Podophyllum Peltatum*) MAY APPLE. Cathartic, operates slowly but surely and in moderate doses without violence. Admirably suited to habitual constipation. The following preparation made into a *pill* and taken every night or every alternate night, has an excellent effect in stubborn cases of habitual constipation:

Podophyllin,	1-5 grain
Ex. of Nux Vomica,	1-2 "
Com. Ex. Colocynth,	3 "

Magnesia (*Calcined Magnesia*). Prepared from Carbonate of Magnesia. It is an alkali, useful in naturalizing the acid of the stomach in cases of indigestion characterized by *sour eructations, heartburn* or flatulence. This remedy is however only palliative and does not remove the cause.

Magnesia, Sulphate of, (*Epsom Salts*). This is a well known and very excellent purgative. Very useful in obstinate constipation caused by lead poisoning. Dose, from two drams to an ounce dissolved in warm water, it acts freely and without griping. Oxalic acid very much resembles epsom salts and has been mistaken for it; the acid may however be easily detected by the acid taste when mixed with water.

Male Fern (*Aspidium Felix-mas*). The best known remedy for *tapeworm*. However it must be properly used to secure the best results.

Move the bowels during the afternoon with castor oil or other efficient purgative, eat a light supper, at bedtime take one-half of a fluid drachm of the oil of *male fern* with a little mucilage or in capsules. In the morning the dose may be repeated, fasting meanwhile, before noon take a dose of castor oil, which in many cases will be followed by the expulsion of the *worm*. If the remedy fails the first time, try again in a day or two, doubling the dose of the drug.

Malt. During the past few years *malt extracts* have been largely employed for their nutritious properties. In many cases of nervous debility they are very beneficial.

Marsh Mallow (*Althæa Officinalis*). See illustration, page 524.

Mercury (*Hydrargyrum*). This remedy in its many forms is a valuable medical agent, but is capable (if not properly used) of very great harm and should not be administered except by the skillful medical man.

Milkweed (*Asclepias*) PLEURISY ROOT. See illustration, page 520.

Mountain Laurel (*Kalmia Latifolia*). See illustration, page 526.

Mustard (*Sinapis Alba*). This common remedy is kept in almost every household and forms an emetic which can be used at a moment's notice, or applied externally to relieve pains. Mustard has many other uses too common to need explanation.

Nettle (*Urtica Dioica*). The juice of nettle has long been used for hemorrhages of all kinds. Dose, ten to thirty grains.

Onion (*Allium Cepa*). Stimulant, diuretic and expectorant. The onion is a very common, yet useful, medical agent and needs no special description.

Opium (*Papaver Somniferum*). Opium is the dried juice which exudes from scarifications made in the green seed capsules of the poppy. Opium produces a soothing effect upon the body and mind, followed by a disposition to sleep. The first effect is that of a stimulant, producing fullness and frequency of pulse, with exhilaration of the mind, this is followed by depression and falling pulse, even below the normal rate. Many persons experience unpleasant after effects, as nausea, vomiting and headache.

Parsley (*Petroselinum Sativum*). Fresh bruised parsley leaves applied will prevent breasts from "caking." It is also recommended in cases of scanty and painful menstruation. Take of a strong decoction a wineglassful three or four times a day.

Pennyroyal (*Hedeoma Pulegioides*). See illustration, page 516.

Peppermint (*Mentha Piperita*). Stimulant and carminative. A hot infusion is useful in cases of *colic, flatulence, diarrhœa, vomiting,* etc.

Pepsin. Prepared from the mucous membrane, lining the stomach of the pig, calf and sheep. Pepsin is one of our best remedies for dyspeptic ailments.

Persimmon (*Diospyros Virginiana*). The persimmon is found in the more southern states and is highly prized for its fruit. The half ripe fruit has been used in cases of dysentery and diarrhœa of long standing. The bark is very bitter, a strong tea of which has been successfully used in treating cases of *fever and ague* and also as a gargle for sore throat of long standing.

Pink-Root (*Spigelia Marilandica*) CAROLINA PINK. See illustration, page 516.

Pipsissewa (*Chimaphila Umbellata*) WINTERGREEN, PRINCE'S PINE. See illustration, page 512.

Poison Ivy (*Rhus Toxicodendron*) POISON OAK. This plant has become well known from its poisonous effects upon the skin and is also highly esteemed as a remedy by many physicians. The symptoms of *ivy* poisoning are itching, redness and swelling of the poisoned parts, in severe cases the swelling increases to an alarming extent. In such cases blisters form upon the surface, and these breaking are apt to be succeeded by ulcers, both painful and intractable. The treatment of *ivy poisoning* is very unsatisfactory. Applications of cold water, solutions of common salt, carbonate of soda, acetate of lead, patiently applied will give greaf relief. *Poison ivy* may readily be distinguished from other species of ivy by having its leaves in threes.

Pokeweed (*Phytolacca Decandra*) SCOKE, GARGET, PIGEONBERRY. See illustration, page 512.

Prickly Ash (*Xanthoxylum Americanum*). See illustration, page 524.

Pumpkin Seeds (*Cucurbita Pepo*). A remedy of reputation for expelling tapeworm, and if properly used they rarely fail. The patient should subsist *entirely* upon the seeds and milk for twenty-four hours. Eat freely and drink a limited quantity of milk to allay thirst, at the expiration of twenty-four hours take a good dose of castor oil.

Quassia (*Simaruba Excelsa*). This wood is a simple bitter tonic, used chiefly in atonic *dyspepsia* and for loss of appetite. It simply tones and stimulates the stomach.

Queen of the Meadow (*Eupatorium Purpureum*). Virtues almost identical to *Boneset.*

Queen's Root (*Stillingia Sylvatica*). This remedy was formerly much used for *scrofula*, *syphilis*, diseases of the *skin* and *liver*. Dose, decoction of an ounce of the bruised bark to a pint of boiling water. Wineglassful three times a day.

Quinine, Sulphate of. See Cinchona Bark.

Ragweed (*Ambrosia Artimisiæfolia*). Bitter tonic properties which have recommended it in intermittent *fevers*.

Rhubarb (*Rheum Palmatum*). Much used to give tone to the *stomach* and *bowels* in doses of two or three grains a day. Larger doses of twenty-five to thirty grains act as a mild purgative. Besides its *cathartic* property, it is slightly astringent; thus after a purgative action the bowels are liable to become somewhat constipated, to avoid this, it may be taken with cream of tartar, or small quantity of jalap or magnesia. When the *liver* is in a torpid condition, combine with calomel. When mixed with two or three times its weight of bicarbonate of soda, it is a very useful purgative for children. It is highly recommended for habitual constipation attended with *piles*, and for constipation of pregnancy, in which cases chew a piece of the root at bedtime.

Rochelle Salt (*Tartrate of Soda and Potash*). The best of the saline cathartics. Dose, from one to two ounces. Often used in *acute rheumatism* for the double purpose of relieving the bowels and rendering the urine alkaline.

Saffron (*Crocus Sativus*). A stimulant aromatic. In domestic practice it has long been used in *scarlet fever*, *measles*, etc. It is also often used to relieve the pains of menstruation, rheumatism and neuralgia. The decoction is prepared in the proportion of two drachms to a pint of boiling water. Drink freely.

Sage (*Salva Officinalis*). Stimulant, tonic and astringent. The cold infusion is useful in checking the profuse sweatings of consumption and those caused by debility alone. It is much aided by adding dilute or aromatic sulphuric acid. The decoction is beneficial as a gargle for ulcers in the mouth and sore throat.

Sarsaparilla (*Smilax Officinalis*). A native of Central and South America and West Indies. It is an excellent restorative and especially beneficial in cases of broken constitution.

Sarsaparilla, False, (*Aralia Nudicaulis*). A common plant of the United States, and often substituted for true sarsaparilla. Its medical properties are not valuable.

Sassafras (*Sassafras Officinale*). This aromatic tree is found in most all parts of our country. The bark of root and the pith of the extremities are the parts used. The latter is light and spongy, when dissolved in water it forms a clear, ropy liquid. It is agreeable to the taste and possesses soothing qualities.

Seidlitz Powders. These are made of rochelle salts, two drachms and bichromate of soda, forty grains (in the *blue* paper). In the white paper, thirty-five grains of tartaric acid. Dissolve contents of each paper in a half tumbler of water, pour together and drink while foaming.

Senna (*Cassia Acutifolia*). Active cathartic, tendency to gripe; some aromatic should always be added. Infusion prepared by pouring two ounces boiling water on three drachms of the leaves, allowing it to stand half hour. May be sweetened and all taken at one dose.

Skullcap (*Scutellaria Lateriflora*). See illustration, page 508.

Skunk Cabbage (*Smyplocarpus Fœtidus*) MEADOW CABBAGE. See illustration, page 518.

Slippery Elm (*Ulmus Fulva*). See illustration, page 516.

Snakeroot, Black. See illustration, page 522.

Snakeroot, Virginia, (*Aristolochia Serpentaria*). See illustration, page 510.

Soda, Bicarbonate of. Often used as an anti-acid in *acidity* of the *stomach* and *heartburn.*

Soda, Borate of, (*Borax*). Very often used for thrush, in nursing infants for cracked nipples, and by injections for sores in the female genital organs. Dose, five to thirty grains; as a lotion or injection, half to a whole drachm in a pint of water.

Soda, Chloride of, (*Common Salt*). A splendid gargle for sore throat, often used to check hemorrhage from the lungs and nose. Dose, a teaspoonful every ten minutes. Salt is very useful in many other cases.

Solomon's Seal (*Polygonatum Giganteum*). Chiefly used internally for *freckles*, *bruises* and *sprains.* The whole plant is used in a lotion. To prepare, macerate in whiskey or diluted alcohol for three weeks.

Spanish Flies (*Cantharides*). Often used internally for diseases of the *skin*, in *debility* and *catarrh of the bladder*, and *acute Bright's disease*, etc. The tincture is the best form for use. Dose, one to twenty drops. Care should be exercised in not giving over-doses.

Spearmint (*Mentha Viridis*). Like peppermint is stimulant and carminative, but less powerful. The oil is chiefly used. Dose, four to five drops.

Spice Bush (*Lindera Benzoin*). Stimulant and diaphoretic. Sometimes used in the forming stages of acute inflammatory diseases. Dose, wineglassful of the decoction made of the bark and berries.

Spikenard (*Aralia Racemosa*). Very similar to *false sarsaparilla*, though the root is slightly more aromatic.

Squill (*Scilla Maritima*). A bulbous plant of Southern Europe, sometimes grown in this country. The bulb possesses the medicinal properties, *diuretic* and *expectorant*. As a diuretic is often used in *dropsy*. As an expectorant is useful in *croup*, chronic *bronchitis*, *whooping cough*, etc. Dose of the bulb, powdered, one to three grains. Tincture, ten to twenty drops. Syrup, half to a teaspoonful.

Staphisagria (*Delphinium Staphisagria*). An ointment made from the seeds will destroy lice on the bodies of filthy persons.

Star Grass (*Aletris Farinosa*). See illustration, page 510.

Stramonium (*Datura Stramonium*) JAMESTOWN WEED. See illustration, page 526.

Sulphur. Internally is chiefly employed in treating *piles*. Take equal quantities of sulphur and cream of tartar, mix thoroughly, and take in syrup once or twice a day. The effects are generally very beneficial. Externally is much used in treatment of *itch*. For details see article on *itch*. Sulphur baths are highly recommended for various *skin diseases*, *rheumatism* and *gout*.

Sumach (*Rhus Glabra*). The berries are acid and astringent. An infusion of the berries or inner bark is often used with excellent effects as a gargle for *sore throat*.

Sweet Fern (*Comptonia Asplenifolia*). Stimulant and astringent. Decoction sometimes used to relieve colic and check diarrhœa.

Sweet Spirit of Nitre (*Sweet Nitre*). Diuretic and diaphoretic. Frequently used in febrile diseases to produce sweating, especially useful in feverish conditions of children; as a diuretic is used in irritable conditions of the bladder and in suppression of the urine. Dose, twenty to thirty drops every hour or two, taken in water.

Tannin. See Acid, Tannic.

Tansy (*Tanacetum Vulgare*). Tonic, stimulant properties similar to wormwood. Formally much used in cases of delayed menstruation, worms and dropsy.

Tar (*Pinus Palustris*). Used extensively in a variety of *skin diseases*, and internally for *pulmonary diseases*. To prepare, take one part tar to ten parts water, mix, and allow to stand two or three days, then pour off the clear water. Dose, wineglassful four times a day or oftener. It has been successfully used in *chronic bronchitis* and *consumption*. Tar may also be usefully employed by inhalation for pulmonary troubles. Stir tar in hot water and inhale the vapor.

Tulip Tree (*Liriodendron Tulipifera*). The bark from the branches has simple, bitter, tonic properties, and useful when simple bitters are desired.

Turpentine (*Oil of, Spirits of Turpentine*). Produced by distilling the resinous exudations of several different species of pine. Its sphere of usefulness is great. Is successfully used in a variety of *hemorrhages*, such as *nose*, *stomach*, *bladder* and *womb*, and is especially valuable in the *typhoid* condition, when there is bloating of the abdomen from accumulation of gas. In typhoid fever it is often used with happy results. Dose, five to twenty-five drops, in emulsion or on a lump of sugar. Turpentine is often used as a counter-irritant in intense inflammatory diseases. Take a folded piece of flannel, dip into hot water, wring as dry as possible, then sprinkle freely with turpentine, apply to the part over the pain, cover with a dry cloth to prevent evaporation, renew as often as found necessary.

Virginia Snake Root. See illustration, page 510.

White Cedar (*Arbor Vitæ*). The strong tincture or fluid extract is highly recommended as an application to *fungous* growths, warts, etc. Also sometimes used internally for pulmonary catarrh and suppressed menses. Dose, ten to fifteen drops.

White Walnut (*Juglans Cinera*). Is often called butternut and oilnut. The medicinal portion is the inner bark of the root. It is a splendid mild purgative and especially valuable in case of habitual constipation of the bowels, or in dysentery and biliousness. It can be made into a tea, using an ounce of bark to a quart of water. Dose, a wineglassful before going to bed.

White Oak Bark. See Black Oak.

Wild Cherry (*Prunus Serotina*). Is found in most all parts of the United States; has a white flower with a bitter odor. The berry is black and pleasant to the taste. The medical properties are found in the berries and inner bark of the roots and branches. The berries are preserved in brandy or whiskey which extract their virtue. The bark

is dried, made into an infusion, produced by adding a large tablespoon heaping full to a quart of cold water and allowed to stand twenty-four hours.

Wild Indigo (*Baptisia Tinctoria*). See illustration, page 510.

Willow. The willow tree has rendered valuable aid in relieving *fever and ague* and similar complaints. The part used is the inner bark of the trunk, and is usually taken in the form of a strong tea. It has been found to exert much power, but quinine is decidedly more effective.

Witch Hazel (*Hamamelis Virginica*). See illustration, page 522.

Wormwood. See illustration, page 522.

Yarrow (*Archillæa Millefolia*). Stimulant, tonic, promotes the appetite and improves the digestion. Highly recommended for *piles*, delayed menstruation, leucorrhœa and flatulent colic. Administered in infusion.

Yellow Dock (*Rumex Crispus*). See illustration, page 508.

In the limited space devoted to this department of "The Cottage Physician" it has been impossible to compress the whole *Materia Medica*, yet it is believed that no really important remedy has been omitted.

MEDICINES.—THEIR PREPARATIONS AND DOSES.—PRESCRIPTIONS.—RECEIPTS.

Tinctures.—Tinctures are spirituous solutions of such of the principles of animal or vegetable substances as are soluble in rectified or in proof spirit. Rectified spirit is the proper menstruum of the resins, essential oils, saccharine matter, etc., of vegetables, and generally of those parts of animal bodies in which their peculiar smell and taste reside. Proof spirit likewise takes upon these partially, and is, besides, the proper menstruum for gummy principles. Tinctures are chiefly used in cases where stimulants are indicated, on account of the spirit which they contain. Tinctures are usually prepared by macerating the materials for forty-eight hours (some substances require seven days) in three-fourths of the menstruum ordered, in a close vessel, with occasional agitation; then decant the liquid, pack carefully the solid ingredients in a percolator, pour over them the decanted liquid, add the remainder of the spirit, remove and press the ingredients, and add, if necessary, sufficient spirit to make up the quantity.

Decoctions.—The extraction of the soluble portions of plants by boiling. It is generally performed in a covered vessel. When the menstruum is valuable, as alcohol, a retort and a receiver, or the common still, may be used to condense and preserve the vapors that would otherwise escape. It is more powerful than infusion by reason of the increased temperature, and is employed to extract the mucilaginous parts of plants, their bitterness, and other vegetable principles. It is not suitable, however, where the virtues of the plants depend wholly or in part on the essential oil or volatile principles which they contain.

Infusions.—Infusion is a solution of some of the principles of vegetables, generally in water, but sometimes in other vehicles. Either hot or cold water may be employed, according to the particular infusion required. The digestion, however,

must be longer when cold water is used. The vegetable substances may be either fresh or dried; when fresh, they must be cut in pieces, and when dry, bruised or coarsely powdered. Water is then poured on the substance employed, and allowed to stand in a covered vessel for a space of time varying with the nature of the vegetable matter. It is afterward strained, and is then fit for use. Infusions are liable to spoil soon, especially when made with warm water, or if the substance be of a fermentable nature. To assist in keeping the infusion, or to increase its powers, alcohol is sometimes added after straining. Wholesale chemists are now accustomed to prepare concentrated infusions for the use of general practitioners. These can be diluted to the ordinary strength at the time of using them, and not only possess the advantage of keeping better, but save much trouble and loss of time.

Pills.—This is a very convenient form of administering medicines, especially such as are very active in their properties and nauseous in flavor, as they can be swallowed without tasting. To prepare them it is only necessary to rub down the ingredients into a finely pulverized state, and add sufficient of some tenacious liquid to form a homogeneous mass, which can be easily divided and rolled into pills. To effect this a pestle and mortar is required; it should be of metal, as the mass generally requires beating to assimilate the ingredients properly ; a short, stout spatula, or palette knife, and a slab of marble or glazed porcelain—if marked with divisions it is so much the more convenient, as pill machines are expensive and scarcely necessary in domestic practice.

The machines are generally made to cut and roll 24 pills, and the sizes for which they are intended range from 3 to 5 grains; the former is the most convenient for swallowing, and it is better to take two of such than one large pill, which is likely to stick in the throat and to remain for a long time undissolved when it is down. Generally speaking, a sufficient quantity of active ingredients is required to make them of moderate size; but sometimes it is desirable to administer very powerful medicines, such as calomel, morphia, etc., in this way, and then it is usual to give bulk and consistence by the addition of such comparatively inert substances as bread crumb, castile soap, soft extract of liquorice, or conserve of roses. When bread is used it should be quite stale, so that it will rub down into a powder and amalgamate with the other ingredients. Pills made with bread and mucilage are apt to become very hard, and are therefore only fit for present use. Pills made

with molasses or conserve remain soft as long as any. If hard soap is used, it should be scraped into the mortar first, and rubbed into a powder. Soft soap is better than hard, but glycerine—better still—has latterly been much employed. For pill-mass intended to be kept for a time, a few drops of olive or other fixed oil is sometimes added to prevent the mass hardening. If resinous gums, such as scammony, enter into the composition of the pills, the necessary moisture may be spirit of wine, which, by dissolving a portion of the resin, will give cohesion to the compound substance; but this is apt to get hard after a while. It is best to keep pills in stoppered bottles; if much exposed to the air they soon harden, and become to a certain extent inert, because insoluble. If kept in pots they should be closely covered; boxes are the worst possible receptacles for them. Some persons can take pills very easily, others only with great difficulty, and some few not at all. The best method is to hold the head back, take the pill between the finger and thumb, and passing these as far into the throat as possible, drop it into the pharynx, swallowing immediately some water or other liquid to carry it down. As a rule, the best time for taking pills is bedtime; when the body is quiescent the operation is less interfered with. Of course there are many cases which require their administration at all times and seasons. Owing to their compactness and portability there is no form of medical preparation so convenient as this.

Powders.—Powder is a very common form in which medicines are administered, particularly to children. Some medicines are best given in the form of powder, in order that their distinctive properties may be most easily brought out. Powders may be either simple or compound, consisting of one substance or of several. The several ingredients should be very finely powdered and well mixed. In general, powders should be given in some thick substance, as honey, molasses, or gum.

Anti-Acids, or Absorbents.—Anti-acids are medicines intended to correct acidity of the stomach and bowels; their action is purely chemical; they combine with the acid and neutralize it, but do nothing to prevent its regeneration; therefore they are simply palliatives, and cannot be depended upon for restoring the tone of the impaired organs. whose powers a long continuance of them is apt to enfeeble. Ammonia, chalk, lime, and all cretaceous matter, magnesia, and the alkalines potash and soda are the chief anti-acids or *absorbents*. These are many forms of preparations, but the action is pretty uniform. Ammonia in its various combinations, where acidity in

the stomach exists with flatulency and tendency to *cramp* or *colic*. Magnesia and the preparations of chalk or lime are best when acid is present in the bowels, causing loose evacuations, griping pains, etc., and this because they pass down the alimentary canal and into the seat of mischief without losing their absorbent powers. Where an alkaline test shows acidity in the urine, preparations of potash are most suitable for administration, as they are more readily soluble than soda, which, in combination with ginger, may be recommended for the unpleasant sensation in the chest and throat called *heartburn*, that being the result of excessive acidity.

(THE DOSES ARE FOR ADULTS.)

In most cases, emetics and aperients are given previous to their being taken. They are:

Ammonia, carbonate, in doses from	5 grains to 1 scruple.
Ammonia, liquor of	10 to 20 drops.
Ammonia, aromatic spirit of	20 to 30 drops.
Lime water	2 ounces to half a pint.
Magnesia, calcined	20 to 40 grains.
Magnesia, carbonate of	half to 2 drams.
Potass, carbonate of	10 grains to half a dram.
Potass, solution of	10 drops to half a dram.
Soda, carbonate of	10 grains to half a dram.
Soda water	half a pint.

Alteratives.—Alteratives are a class of medicines whose object is to effect a gradual change in the state and condition of the functions, secretions, etc., and establish the healthy habit which has somehow become deranged.

An alterative medicine, then, is supposed to be one which produces a new effect, and thus *alters* or diverts the attention of the system, if we may so speak, from the original disease; it is generally directed, or intended to act upon the immediate seat of mischief, as the liver, the blood, etc. Small doses and frequent is the general rule with regard to the administration of alteratives, and in this way some of our most active and even poisonous drugs are employed to produce very beneficial results. It is properly through the medium of the excretions and secretions that alteratives act; they are taken from all classes of medicines, mineral as well as vegetable.

Anodynes.—Anodynes are medicines which assuage pain; generally *opiates*,, or *narcotics*. These medicines act by diminishing sensibility and inducing sleep, or a state of stupor, which is near akin to it.

PILLS.

Purified opium	4 grains.
Extract of henbane	15 grains.
Extract of lettuce	10 grains.

Mix. Make into 6 pills, take one at bed time for long-continued cough.

PILLS OF MORPHIA.

Sulphate of morphia	3 grains.
Conserve of roses	sufficient to mix.

Dose, one pill when necessary.

CAMPHOR PILLS.

Camphor	half a dram.
Gum and alcohol	sufficient to mix.

Divide into 15 pills, dose 1 every two hours. Excellent to allay nervous irritability, and to act on the skin.

HENBANE PILLS.

Extract of henbane	half a scruple.

Powdered liquorice root sufficient to make 10 pills. Give one or two to procure sleep, ease pain, and allay irritation arising from a tickling cough.

MIXTURES.

To quiet the nervous system and allay irritability.

Bromide of potassium	1 dram.
Syrup of orange peel	3 ounces.
Water	3 ounces.

Mix. Dose 1 to 3 tablespoonfuls.

HENBANE DRAUGHT.

Tincture of henbane	1 dram.
Camphor water	2 ounces.

Mix. To be taken at once, at bed time, repeated in two hours if the patient does not sleep.

FOXGLOVE MIXTURE.

Tincture of purple foxglove	3 drams.
Camphor water	6 ounces.
Orange syrup	half ounce.
Prussic acid	6 drops.

Mix. Dose, two tablespoonfuls two or three times a day. A good remedy for nervous palpitations, but must be used with great care.

LETTUCE MIXTURE.

Tincture of lettuce	6 drams.
Distilled water	6 drams.
Water of cherry laurel	2 drams.
Simple syrup	1½ ounce.

Mix. Dose, a tablespoonful morning and evening.

MIXTURE FOR INFLUENZA, COLD, COUGH, BRONCHITIS, ETC.

Camphor water	5 ounces.
Sweet spirit of nitre	2 drams.
Tincture of opium	4 drops.
Syrup of poppies	4 drams.

Mix, take two tablespoonfuls every four hours.

CLYSTER.

Tincture of opium	1 dram.
Infusion of linseed	6 ounces. Mix.

POULTICE.

Dried Hemlock leaves	2 ounces.
Crumb of bread	6 ounces.
Water	half a pint.

Boil together; used in foul ulcers, etc.

DRAUGHT.

Tincture of opium	10 drops.
Syrup of poppies	2 drams.
Spirit of cinnamon	1 dram.
Water	1 ounce.

This is taken on the approach of the warm stage in bronchitis, ague, and intermittent fevers.

Cathartics, Aperients, Laxatives, Purgatives.— These are different terms for purging medicines. A laxative or aperient only acts as a mild purge in emptying the bowels, whereas a purgative not only so acts, but affects the whole system; and, when very violent, it is denominated a cathartic or drastic. Examples of excellent combinations or these medicines:

CATHARTIC PILLS.

Compound extract of colocynth	1 dram.
Extract of henbane	6 grains.
Oil of nutmeg	4 drops.

Well mix together, and divide into twelve pills; take two every two or three hours till effective.

APERIENT DRAUGHT.

Epsom salts,	3 drams.
Spearmint water,	3 ounces.
Antimonial wine	20 drops.

Mix, and take for a dose early in the morning.

LAXATIVE MIXTURE.

Sulphate of magnesia, or Epsom salts	half an ounce.
Sulphate of iron	5 grains.
Camphor mixture	3 ounces.

Two or three tablespoonfuls twice a day.

FOR THE PAINTER'S COLIC.

Castor oil,	half an ounce.
Yolk of egg	sufficient quantity.

Beat up, and then add:

Syrup of poppies	2 drams.
Tincture of opium	5 drops.
Distilled water	8 ounces.

Make a draught to be taken every three or four hours.

Antiseptics.—These prevent putrefaction. They are the tonics, as Peruvian bark, myrrh, alum, camomile, etc., which can be generally used for those of relaxed habits. The refrigerating, as acids, given to the young and plethoric. The stimulating, as wine and alcohol, for the old and debilitated. The anti-spasmodic, as assafœtida and camphor, for the irritable and hysterical.

ELECTUARY IN SCURVY.

Bark, powdered	half an ounce.
Aromatic confection	half an ounce.
Syrup of oranges	sufficient quantity.

Mix, take the size of a nutmeg every quarter of an hour, in a glass of Seidlitz or soda water.

SCURVY IN THE GUMS.

Infusion of roses	6 drams.
Alum	half a dram.
Honey	1 dram.

Mix, and make into a gargle.

GARGLE IN PUTRID SORE THROAT.

Decoction of bark	6 ounces.
Muriatic acid	half a dram.
Tincture of orange peel	5 drams.
Tincture of myrrh	1 dram. Mix.

ANOTHER.

Decoction of bark	6 ounces.
Tincture of myrrh	2 ounces.
Diluted sulphuric acid	half a dram.

Mix for a gargle.

Anti-Spasmodics.—Spasms are involuntary contractions of the muscles; when from irritation, narcotics are best; as opium, camphor, and ether; when from debility, tonics; as zinc, mercury, and Peruvian bark. But the so-called true anti-spasmodics are musk, castor, ammonia, assafœtida, valerian, etc.

ANTI-HYSTERIC MIXTURE.

Take assafœtida, 1 dram; and gradually mix well with

Peppermint water	half a pint.
Aromatic spirit of ammonia, or sal volatile	2 drams.
Tincture of castor	3 drams.
Sulphuric ether, compound of	1 dram.

Strain and take a tablespoonful every two hours.

MIXTURE IN CONVULSIVE OR WHOOPING COUGH.

Tincture of opium	6 drops.
Ipecacuanha wine	1 dram.
Simple syrup	3 drams.
Carbonate of soda	24 grains.
Water	1 ounce.

This mixture may be given in whooping cough, the sixth part every six hours for a child five or six years old.

DRAUGHT IN PALPITATION OF THE HEART, WITH GREAT NERVOUS IRRITABILITY.

Tincture of foxglove	10 drops.
Camphor mixture	1 ounce.
Tincture of columba	1 dram.

To be taken twice a day.

DRAUGHT IN HYSTERIA AND WINDY COLIC.

Camphor mixture	1 ounce.
Fœtid spirit of ammonia	1 dram.

Aromatics.—Aromatic medicines are used to allay irritation of the stomach and bowels, and to remove flatulency.

AROMATIC STOMACH PILLS.

Powdered aloes	6 drams.
Gum guiacum	4 "
Aromatic confection	2 "
Balsam of Peru	2 "
Syrup of ginger	sufficient.

Mix. Make into 200 pills. Dose, 1 twice a day.

POWDER

for expelling wind and alleviating spasms.

Cinnamon	1 ounce.
Cardamom seeds	1 "
Ginger	1 "
Cayenne	2 "

Mix. Dose, a teaspoonful in a little hot water sweetened.

AROMATIC SPIRTIS OF ETHER,

for spasms, flatulency, asthma, hysteria.

Bruised cinnamon	6 drams.
Powdered cardamom seeds	3 "
Cayenne	1 "
Sliced ginger	1 "
Spirit of sulphuric ether	1 quart.

Digest for fourteen days, then distil. Dose, 30 drops to teaspoonful.

Astringents.—These, when applied to the body, make the solids denser and firmer; they diminish excessive discharges, and often lessen morbid sensibility or irritation, and may thus restore strength.

ASTRINGENT OINTMENT.

Galls in powder	1 dram.
Hog's lard, prepared	1 ounce.

Smear on the part in piles, etc.

DRAUGHT FOR UTERINE AND OTHER BLEEDINGS.

Muriated tincture of iron	10 drops.
Water	1 ounce.

Take every three hours.

Alum whey, made by adding two drams of pounded alum to a pint of hot milk, and a wine glassful taken every two or three hours, is a safe and powerful astringent given in internal bleedings, female discharges, etc.

PILLS FOR SPITTING OF BLOOD, INTERNAL BLEEDINGS, ETC.

Acetate of lead	3 grains.
Purified opium	1 grain.
Extract of hemlock	10 grains.

Make three pills, one to be taken twice a day, drink after them vinegar and water.

INJECTIONS FOR WHITES AND DISCHARGES IN FEMALES WHEN THE PARTS ARE IRRITABLE.

Oak bark, bruised	6 drams.
Distilled water	10 ounces.

Boil ten minutes, then use four ounces mixed with four ounces of linseed infusion.

Carminatives.—These medicines ease pain and dispel wind.

DRAUGHT FOR FLATULENCY AND INDIGESTION.

Rind of Seville oranges	3 drams.
Fresh lemon peel	2 drams.
Ginger, in powder	half a dram.
Boiling water	8 ounces.

Infuse two hours and strain; then take

Of the above	half an ounce.
Spirit of peppermint	half a dram.
Spirit of lavender	half a dram.

This draught to be taken three times a day.

ANTI-FLATULENT MIXTURE.

Oil of anise seeds	10 drops.
Refined sugar	1 dram.

Beat up together, and add

Tincture of ginger	2 drams.
Peppermint water	6 ounces.

Mix. Take three tablespoonfuls as often as required.

FOR WIND IN THE INTESTINES.

Particularly the colon, which distends them.

Assafœtida	6 grains.
Rhubarb	4 grains.
Oil of anise seed	5 drops.

Make two pills, and take every five or six hours.

Cerates.—*Cerates* are for the purpose of covering and keeping clean ulcers, wounds, burns, etc. They differ from ointments by having more wax in them.

CALAMINE CERATES.

Prepared calamine	4 ounces.
Yellow wax	4 ounces.
Olive oil	8 ounces.

Shred the wax, pour on the oil, let them melt over a slow fire; when sufficiently cool stir in the powdered calamine. This is applied to ulcers and wounds where the skin is broken; to burns and scalds after the pain and violence of the inflammation have ceased. With half a dram of the soft extract of opium, to an ounce of the cerate, it is employed to gently smear the eyelids in ophthalmia tarsi. When a teaspoonful of the Goulard-lotion is mixed with this cerate, it forms the common application of many eminent physicians to scalds and burns.

COMPOUND CERATE OF LEAD.

Acetate of lead	2 ounces.
Yellow wax	4 ounces.
Olive oil	9 ounces.
Camphor	half an ounce.

With a little oil the camphor is rubbed down. The remainder of the oil and wax gently melted near a fire, and the lead stirred in; when nearly cold, the oil with the camphor is added, and stirred till cold. This is used in burns and scalds, and to prevent that constant flowing of tears in aged people.

Clysters.—This mode of administering purgatives in many instances is far superior to any other, as it does not unnecessarily stimulate the whole of the bowels, and render them fee-

ble and unhealthy, so as to require constant attention; besides, in some states of the body, the stomach will not retain the requisite medicine. There are diseases, such as lockjaw, some forms of insanity, etc., in which nourishment has in this manner to be conveyed to the body.

FOR DYSENTERY, VIOLENT PURGING, PAINS IN THE LOWER BOWELS, ETC.

Starch	8 ounces or a pint.
Tincture of opium	40 to 60 drops.

LAXATIVE—APERIENT.

Epsom salts	1 ounce.
Thin gruel, warm	1 pint.
Fresh butter, or olive oil	1 ounce.

ASTRINGENT IN PILES, ETC.

Galls, powdered	half an ounce.
Distilled water	1½ pint.

Boiled down to a pint and strain; administer warm.

IN STONE; STOPPAGE OF URINE; IRRITABILITY OF BLADDER; LOCKJAW, ETC.

Turpentine, spirits of	half an ounce.
Infusion of linseed	one to two pints.
The yolk of an egg	mix together.

Administer warm.

IN SPASMODIC COMPLAINTS.

Tincture of assafœtida	half an ounce.
Tincture of opium	20 to 40 drops.
Thin gruel	one to two pints.

A COMPOUND GIVEN IN STUPOR, ETC., FROM INJURIES TO THE HEAD OR SPINE.

Extract of colocynth	1 scruple to ½ dram.
Boiling water	one pint.
Common salt	half an ounce.

NUTRITIVE, TO BE REPEATED EVERY SIX HOURS.

Milk, mutton, broth, starch, etc.	6 ounces.
Warm water	4 ounces.

Demulcents.—Medicines which have softening and soothing properties; rendering them especially suitable for obviating the action of acrid and stimulant matters, not so much by correcting or changing their nature, as by involving them or the delicate tissue exposed to their action, in a mild and viscid fluid. Their chief employment is in catarrh, diarrhœa, gonorrhœa, dysentery, gravel stone, etc. They may generally be divided into two divisions, mucilages, and expressed oils; in the first, we have almonds, coltsfoot, Arabic and several other gums, linseeds, mallows, liquorice-root, swinewort, barley, oats,

and wheat, sago and starch. Among the latter are most European and many foreign oils, fat, and other animal substances, including hartshorn shavings, gelatine and isinglass, spermaceti and wax. The following is a pleasant and efficacious demulcent draught, suitable where there is fever: Almond mixture 1 ounce, carbonate of potash 10 grains, syrup of poppies 1 dram; mix and add a tablespoonful of lemon juice or 10 grains of citric acid, and drink while in a state of effervescence. As a form for a cough mixture, easily prepared, take oil of almonds 6 drams, liquor of potash 1 dram, shake well and make up to 8 ounces with rose or plain water; sweeten with syrup of poppies and add paragoric elixir, 2 drams, or tincture of squills, if required to be more expectorant. The best demulcent enema is made by dissolving 6 drams of starch in a half-a-pint of hot water, add 1 dram of tincture of opium if necessary.

Diaphoretics.—These are medicines that cause perspiration, the action being increased by being in bed, remaining in the warm atmosphere of a room, or placing the feet in hot water.

DIAPHORETIC POWDER.

Compound powder of ipecacuanha . . .	10 grains.
Powder of antimony	5 grains.

Take at bed time, in some warm liquid or gruel.

POWDER.

Ipecacuanha powder	2 grains.
Purified opium	half a grain.
Nitrate of potass or saltpetre	10 grains.

Take at bed time in a severe attack of influenza or bronchitis, in gruel.

TONIC AND DIAPHORETIC MIXTURE, FOR RHEUMATISM AND LUMBAGO.

Guaiacum, powder of	2 drams.
Gum arabic	2 drams.

Pound well together, then add,

Tincture of opium	30 drops.
Tincture of bark	2 drams.
Camphor water	8 ounces.

A wine-glassfull twice a day.

IN CONTINUED RHEUMATISM, ETC.

Gum guaiacum, in powder	5 grains
Compound powder of ipecacuanha, or Dover's powder	10 grains.
Honey a sufficient quantity to make a bolus .	

Take at bed time.

DRAUGHT TO PRODUCE PERSPIRATION IN COLDS, INFLUENZA, ETC.

Camphor mixture	1 ounce.
Liquid acetate of ammonia	half a dram.

Antimony wine	20 drops.
Paragoric elixir	2 drams.

To be taken at bed time.

SPIRIT OF MINDERERUS.

Solution of Acetate of Ammonia.

Good pure vinegar	6 ounces.
Muriate of ammonia (*sal ammoniac*)	sufficient quantity.

Drop the powder very slowly into the vinegar, in an open vessel, and continue adding, until the effervescence becomes scarcely perceptible.

This is an excellent diaphoretic in fevers. Care must be taken to stop adding the powder before the effervescence has entirely ceased; for the decomposition of the salt goes on slowly towards the conclusion of the process, and it is better that the acid in the mixture should be in very slight excess. If the solution be kept in a vial, it should be left open for a few hours before corking. Dose, for an adult, a tablespoonful or two, taken every two or three hours.

Diuretics.—Medicines which augment the urinary discharge; this effect will be produced by any substance which stimulates the secreting vessels of the kidneys. All the saline diuretics act in this way; they pass into the circulation, and appear to exert a specific action upon these vessels. The free drinking of mild diluents will also have this effect, while the application of external heat to the body will exert a contrary influence by exciting perspiration, which is an increased cutaneous secretion. Diuretics are useful as adjuncts chiefly; their action alone is not to be depended on for the cure of disease; they are merely palliatives. Thus, in dropsy, in which they are chiefly employed, if perfectly successful, they do but remove for a time a portion of the effusive fluid, which quickly collects again; they are sometimes useful in calculous affections, and also in gonorrhœa, and they have a tendency to check profuse perspiration, and diminish plethora; but their frequent and constant use is very weakening to the system.

DIURETIC PILLS FOR STONE, GRAVEL, ETC.

Carbonate of soda	2 drams.
Castile soap	1½ "
Oil of juniper	30 drops.
Syrup of ginger	sufficient.

Mix. Make 30 pills. Dose, 2 three times a day.

DROPSY PILLS.

Blue pills	2 drams.
Powdered squills	4 scruples.

powdered foxglove	1 dram.
Syrup of ginger	sufficient.

Make into 64 pills. Dose, 1 pill three times a day.

INFUSION FOR DROPSY.

Bruised juniper berries	2 ounces.
Bruised anise seeds	2 drams.
Boiling water	1 pint.

Let it stand for three hours, then strain. Take a teacupful often.

DRAUGHT FOR DROPSY.

Acetate of potass	half a dram.
Oxymel of squills	1 dram.
Compound spirit of juniper	half a dram.
Nitric spirit of ether	20 drops.
Water, or camphor water	2 ounces.

Take every morning.

DIURETIC, AND STIMULATING DRAUGHT.

Carbonate of potass	10 grains.
Compound infusion of gentian	8 drams.
Compound spirit of ether	half a dram.
Tincture of cinnamon	1 dram.

Take as occasion may require.

Diluents.—Diluents are liquids administered to increase the fluidity of the blood, and render certain of the secretions and excretions less viscid. They likewise promote the operation of more active medicines, especially aperients and diuretics. Water is the simplest and frequently the best diluent; or it may be made more agreeable by the addition of acid or other substances, or in the form of toast and water. Gruel, infusion of tea, mutton and chicken-broth, beef-tea, and such-like, come unker this designation. Diluents are of great use in allaying the thirst of patients affected with fever or other inflammatory complaints, and are often very useful in subduing the more violent spmptoms of the disease, and relieving the system by means of perspiration. The excessive use of fluids at meals, however, is hurtful to digestion.

Embrocations.—Embrocation is a term originally applied to those external applications used for softening or dissipating swellings. The word has, however, extended beyond it primary meaning, and is applied to oleaginous and spirituous compounds which incite the surface of the skin to increased action, and produce all the effects of counter-irritants, or which, by their influence on the extremeties of the nerves, assist in resolving spasm; thus acting as anti-spasmodics.

For inflammation of the skin, bruises, swelling of the glands and contusions, where blood vessels have been ruptured under the skin, a pint of good vinegar and half a pint of strong spirits is found very beneficial. Alum added to it is good for chilblains.

FOR SPRAINS AND BRUISES.

Especially where the parts are discolored with blood underneath the skin, and in rheumatic swelling of the joints.

Vinegar	1 pint.
Distilled water	half a pint.
Rectified spirits	1½ "
Camphor	2 ounces.

Mix the vinegar and water, dissolve the camphor in the spirit of wine, and then put them altogether.

FOR SPRAINS, BRUISES AND OTHER INJURIES,

When the skin is not broken.

Carbonate of ammonia	2 ounces.
Vinegar	2 pints.
Proof spirit	3 "

Mix the ammonia with the vinegar; when the effervescence ceases, add the spirit. In inflammation of the joints of some standing, this is mixed with linseed meal, and applied as a poultice twice a day.

FOR LUMBAGO, GOUTY PAINS, AND RHEUMATISM,

The following is often highly benficial:

Soap liniment	2 ounces.
Spirit of camphor	1 ounce.
Oil of thyme	2 drams.
Tincture of opium	1 dram.

Mix and rub well over the part affected. A piece of lint dipped in this, and put in a hollow tooth, frequently arrests aching.

Emetics.—Emetics are medicines which influence the stomach in a peculiar manner, so as to invert its action and produce vomiting. The effect is caused not by the quantity of the matter introduced, but by the nature of the emetic itself. Emetics are useful when it is found necessary to relieve the stomach of some hurtful or indigestible substances. Lives that have been endangered either by poisons or excess of food have frequently been saved br means of emetics. In cases of fever, emetics are frequently used; it is supposed that the copious secretion which they produce from the glands of the stomach and intestines has a direct curative action. They tend to render the disease milder, and should be administered at as early a stage of the disease as possible. They may be advantageously repeated even at a more advanced stage, as they induce sleep

and a moist state of the skin. Emetics, however, should always be given with great caution, since, in cases of depression of the system, their action is to produce nausea, by which the vital power is always diminished. The emetics generally used consist of preparations of antimony, zinc, and copper. Squills, lobelia, ipecacuanha, and other substances, are also employed. Mustard and water, diluted, is one of the mildest and most generally used emetics, Emetics should never be administered to a patient who is disposed to apoplexy, or has a tendency of blood to the head, or where he is liable to hemorrhage from any organ, or is subject to hernia. During pregnancy, also, emetics must be avoided.

AN EMETIC DRAUGHT.

Tartarized antimony	1 grain.
Ipecacuanha wine	2 drams.
Water	1½ ounce.

Half to be taken, and repeated in twenty minutes, if sickness be not induced.

MIXTURE.

Ipecacuanha wine	half an ounce.
Tartarized antimony	1 grain.
Tincture of squills	half a dram.
Distilled water	7 ounces

Take four tablespoonfuls; if not effective, take two tablespoonfuls every half hour afterwards.

Emmenagogues.—*Emmenagogues* are medicines to promote the natural functions peculiar to females.

MIXTURE FOR THE WEAK AND PALE, IN CASES OF RETENTION.

Myrrh, in powder	2 drams.
Sulphate of iron	50 grains.
Carbonate of potass	1 dram.
Spirit of nutmeg	1 ounce.
Water	18 ounces
Sugar	2 drams.

Pound the myrrh with the carbonate of potass and spirit of nutmeg perfectly; then add gradually the water, after which the sulphate of iron and sugar. In retention, take two tablespoonfuls every fourth or sixth hour.

EMMENAGOGUES PILL.

Aloes pill, with myrrh	1 dram.
Compound iron pill	1 dram.
Carbonate of soda	1 scruple

Make into thirty pills; take two twice a day.

Expectorants.—*Expectorants* are for the purpose of relieving the throat, lungs, and air passages from an accumulation of mucus.

POWDER.

Myrrh, in powder	16 grains.
Ipecacuanha, in powder	6 grains.
Nitrate of potass	10 grains.

Divide into four; take one every four hours.

DRAUGHT.

Syrup of squills	1 dram.
Ipecacuanha wine	10 drops.
Carbonate of potass	10 grains.

Take with a desert spoonful of lemon juice effervescing three times a day.

MIXTURE.

Ipecacuanha wine	1 dram.
Sweet spirit of nitre	2 drams.
Syrup of squills	6 drams.
Camphor water	3 ounces.

Mix: a tablespoonful when the cough is troublesome.

Liniments.—*Liniments* are for the purpose of subduing swellings, or to act as counter-irritants on the skin, and thus prevent inflammation sinking deeper into the part. Rubbing gently with the hand or hair brush often answers the purpose of dispersing swelling. When a joint has to be rubbed, the hand sometimes hurts the skin, and cannot well be continued more than a quarter of an hour, in which case it is usual to lay on the palm a little oil or lard.

Opodeldoc.—This is more commonly known by the name *soap liniment*—to make which, put an ounce of camphor into half a pint of strong, pure spirits, slice very thin three ounces of hard white soap, and put it also into the bottle; shake it several times a day, until the whole is perfectly dissolved, when it is fit for use.

Mustard Liniment.—Shake well for a few days an ounce of fresh-ground mustard in a pint of spirits of turpentine; when well settled, carefully pour off the liquid from the mustard. Cover the hand when applying it, and only continue until the part smarts. Useful in chilblains, lumbago, etc.

Hartshorn and oil is a common application, especially in stiff necks and slight rheumatism; the proportions are one-third hartshorn to two-thirds of oil.

Chilblain Liniment.—Camphor, 10 grains; turpentine, 2 drams; soap liniment, 10 drams.

Lotions.—*Lotions* are employed for different purposes, to cool and soothe the parts, to dry and absorb, or to irritate and stimulate.

COLD WATER is very common now in medical practice as an evaporating wash. A single piece of linen is laid over the part, which is exposed to the air, and as it dries more water is dropped on from a sponge; if used to ease severe pain, add a teaspoonful of laudanum to a pint of water.

SPIRIT LOTION.—Rectified spirit of wine, 1 ounce; water, 15 ounces. Should this spirit not be at hand, use a quartern of good drinking spirits; used as an evaporating wash in inflammations and bruises.

LEAD LOTION, OR GOULARD WATER.—Sugar of lead, 1 dram; diluted acetic acid, half an ounce; spirits of wine, half an ounce; water, 10 ounces. When wanted as a lotion for the eyes, the proportions are two grains of the sugar of lead to two tablespoonfuls of water.

ZINC LOTION.—Sulphate of zinc, one dram; water, one pint. This is a drying wash used in cracking of the skin, and after burns and scalds, to heal them and arrest the discharge.

LOTION OF ALUM—Add half a dram of alum to one pint of water; an excellent lotion in inflammation of the eyes.

LIME WATER is also employed as a drying wash. Pour nearly a pint of water gradually on to a pound of unslaked lime, stir well, let it stand until the lime has fallen to the bottom, then pour the water off, and it is ready for use. Taken internally in indigestion, mixed with milk; as an astringent in dysentery and diarrhœa; and in children's bowel complaints.

Ointments.—*Ointments* are uted for the purpose of dressing sores, and to protect them from the air; the most simple serve this purpose best. They are made by melting the ingredients together in a pipkin by the side of the fire; be very careful not to let them boil.

OINTMENT, COMMON.—Melt together one part of yellow wax and two parts of hog's lard; white wax is sometimes preferred, and olive oil may sometimes be substituted for the lard.

TARTAR EMETIC OINTMENT.—Tartar emetic, 1 dram; lard, one ounce; mix. Applied instead of blisters to the chest, in inflammation of lungs, etc.

SPERMACETI OINTMENT.—Melt, as before, a quarter of an ounce of white wax, three quarters of an ounce of spermaceti, and three ouncer of olive oil. Use as a dressing, after blistering.

OINTMENT FOR PILES.—Powdered galls, 2 drams; sugar of lead, 20 grains; lard, 2 ounces; rub them on the bottom of a plate well together.

ELDER-FLOWER OINTMENT.—Elder flowers, 2 lbs,; lard, 2 lbs.; simmer till crisp, and strain. Used as a cooling ointment to sunburns, etc.

PERUVIAN BALSAM OINTMENT.—Peruvian balsam, 1 dram; hog's lard, one ounce; mix. An excellent healing ointment for sore breasts, excoriations, etc.

RED PRECIPITATE OINTMENT.—Red precipitate of mercury, 1 dram; common ointment, 1 ounce; mix on the bottom of a plate. Useful as a stimulating dressing to wounds and sores, as is also the following:

YELLOW BASILICON.—Melt together yellow wax, 2 ounces; white resin, 5 ounces; hog's lard, 7 ounces; stir well while melting.

Poultices.—On the utility of poultices in cases where the application of warmth and moisture is required we need not here insist, for all who have had anything to do with the treatment of disease are fully aware of this. Very often, however, they fail of producing the expected good effects, because they are not properly prepared or applied; we therefore deem it well to give directions for the preparation of those most commmonly employed

Bread and Water Poultice.—Put into a basin a sufficient quantity of crumbs, and cover it with boiling water; let it stand with a plate over it to keep the steam for a minute or two, then draw off the water, and turn out the contents of the basin into a piece of folded linen, sufficiently large to cover the affected part; to which, having first spread over it a little lard, to prevent its sticking when dry, apply the poultice next the skin, keeping it close by means of a bandage or wrapper of some kind. If not required warm, merely soak sufficient bread in cold water, and apply it, when saturated, on a fold of linen, as directed above.

Linseed Meal Poultice.—Pour some boiling water into a basin, and add gradually the meal, stirring with a stick until the mixture becomes quite a stiff paste; then spread it an inch thick on folded linen, and apply.

Mustard Poultice.—To make this, take as much as may be required, in equal proportions, of best of flour mustard and linseed meal, or bread crumbs; put them in a basin previously warmed, and add gradually as much boiling water as may be necessary; grease, and apply as above directed, or simply mix the mustard in hot water, spread the paste on linen, place over it a piece of muslin, and place it next the skin; if it is desirable to make it more stimulating, some scraped horse-radish will have this effect. The length of time that a mustard poultice may remain on must be regulated in great measure by the feelings of the patient.

Yeast Poultice.—Add to half a pound of linseed meal, in a basin, a quarter of a pint each of beer yeast and water heated, mix gradually with a spoon or stick; spread on linen, and apply. It should be renewed every six or eight hours, as should the linseed meal poultice.

Charcoal Poultice.—Add to a common bread and water poultice, while quite hot, about an equal quantity of linseed meal and charcoal; mix, spread on linen, and apply. Useful for gangrenous and fœtid sores.

Salt and Water Poultice is made like one of bread and water, by merely dissolving a tablespoonful of common salt in the water previous to mixing; this is recommended for chronic abscesses.

Almost any soft substance that will retain heat or moisture may be used to form a poultice, which should be perfectly smooth, and free from lumps or hardness; recently a preparation called *spongia piline* has been employed; this was merely to be soaked in a hot liquid, drained out, and laid on with oiled skin, or some other waterproof material over it; indeed, all

poultices should be so covered, the heat and moisture is thus retained longer than they otherwise can be.

Medicated Poultices are frequently prepared by using a decoction or infusion of the medicinal agent, such as hemlock, or poppy, instead of plain water, with bread or oatmeal. Take of dried hemlock leaves, 1 ounce; water, a pound and a half; boil down to a pound, and add of powdered hemlock leaves sufficient to make a poultice. This is often used for lulling pain in cancerous sores, etc.

Arrow-root Poultice is recommended as a soothing application for irritable sores, etc. Hops, camomiles, scraped carrot and turnip, and a variety of other substances, are also used for this purpose, but it is doubtful whether they possess any advantages over those more commonly employed.

Poulticing of wounds and abscesses is sometimes carried too far. Up to a certain point it is good; but when the discharge becomes thin and serous, and increases rather than diminishes, and the healing process appears to stop, it is time to stay this kind of application, and substitue water dressing, which often gives a more healthy character to the affected part.

Tonics.—*Tonics* are medicines employed to improve the tone or strength of the system by acting on the muscular fibres through the nerves. Tonics are stimulants of a certain kind, but differ from ordinary stimulants in the permanence of their effects. They are usually prescribed in small doses frequently repeated, and are persevered in for some time. It is generally necessary to begin with a mild tonic, before taking one more powerful. If carried to excess or too long-continued, tonics act as irritants, weaken the system, or induce disease. Among the tonics in more common use may be mentioned cinchona, quassia, gentian, chiretta, cusparia, calumba, cascarilla, strychnine; the various preparations of iron, bismuth, copper, zinc, arsenic; hydrochloric, nitric, and phosphoric acids.

PILLS, TONICS AND PURGATIVE.

Sulphate of iron	10 grains.
Extract of gentian	half a dram.
Aloes	1 dram.

Mix. Divide into thirty pills. Take two daily, an hour before dinner.

IN INTERMITTENT FEVERS.

Peruvian bark	half an ounce.
Sulphate of magnesia (Epsom salts) . .	3 drams.

Mix well. Divide into four. Take one every other hour between the paroxysms, dissolved in water.

A mixture given in hysterics, the doloureux, debility after fever, etc.

Infusion of quassia or cascarilla	6 ounces.
Tincture of bark	half an ounce.
Aromatic confection	1 scruple.
Aromatic spirit of ammonia	1 dram.

Two tablespoonfuls twice a day.

Infusion of quassia; of cascarilla, or of camomiles. A wine-glassful taken two or three times a day.

TONIC MIXTURE FOR NERVOUS DISEASES.

Pyrophosphate of iron	1 dram.
Syrup	2 ounces.
Cinnamon water	2 "

Dose, 1 tablespoonful after each meal.

TONIC DRAUGHT.

Gentian root	1 ounce.
Calumba root	1 "
Bitter orange peel	1 "
Boiling water	1 quart.

Infuse till cold, then strain and add tincture of calumba and tincture of ginger, of each, one ounce. Dose, 3 tablespoonfuls three times a day.

TONIC MIXTURE FOR GENERAL WEAKNESS.

Extract rhatany root, 3 drams, dissolve in infusion of buchu leaves 12 ounces, then add aromatic tincture of rhatany root one ounce, aromatic spirit of ammonia, 2 drams. Mix. Dose, two tablespoonfuls every three hours.

TONIC PILLS.

For weakness of the bladder and spermal debility.

Sulphate of quinine	1 scruple.
Powdered cantharides	10 grains.
Extract of aloes	1 dram.
Extract of myrrh	1 "
Sulphate of iron	4 scruples.
Extract of gentian	4 "
Extract of dandelion	4 "
Oil of cajeput	10 drops.

Mix. Divide into 125 pills. Dose, 1 or 2 twice a day.

TONIC PILLS FOR NERVOUS OR SPERMATORRHŒA DEBILITY.

Borax	2 scruples.
Musk	1 "
Ambergris	1 "
Extract of aloes	1 "
Extract of Indian hemp	10 grains.
Oil of cinnamon	10 drops.

Mix. Divide into 30 pills. Dose, 2 or 3, twice a day.

Stomachics.—These are medicines which stimulate or excite the mucus coats of the stomach.

DECOCTION FOR INDIGESTION.

Gentian and calumba roots, each . . .	1 ounce.
Water	3 quarts.

Boil down to half, strain; add compound tincture of cardamoms, two ounces. Dose, a teacupful two or three times a day.

MIXTURE FOR WEAK STOMACH ATTENDED WITH NERVOUS HEADACHE.

Aromatic spirit of ammonia and compound tincture of gentian, each	½ ounce.
Infusion of cascarilla	7 ounces.

Mix. Dose, two tablespoonfuls 3 times a day.

PILLS FOR DYSPEPSIA.

Socorine aloes	1 dram.
Powdered myrrh and rhubarb, each . .	2 drams.
Oil of camomile	20 drops.
Extract of camomile	3 drams.
Syrup of rhubarb	sufficient to mix.

Make into 125 pills. Dose, one or two before dinner.

STOMACHIC TINCTURE FOR WEAKNESS AND FLATULENCE.

Cinnamon and ginger bruised, of each half an ounce; capsicum pods, lesser cardamom seeds and caraway seeds, bruised, of each two drams; proof spirit, one pint; infuse seven days, strain. Dose, a wine-glass twice a day.

A COLLECTION OF WELL-TRIED DOMESTIC VEGETABLE REMEDIES.

As many of our friends may prefer the treatment of disease through the medium of herbs alone, we herein give, in addition to the herbal preparations in the previous parts, many other formula; and amongst them will be found the principal forms used by the best eclectic physicians and botanical medicine practitioners of America and Europe.

Anti-dyspeptic Powder.—Cayenne and golden seal, of each two ounces; saleratus, half an ounce—mix in powder. Dose: half a teaspoonful in hot water, fifteen minutes after a meal, in indigestion, pain in the stomach, etc.

Anti-dyspeptic Pills.—Golden seal, powdered, three ounces; cayenne, five drams; inspissated oxgall, Q. S.—mix; divide into five grain pills. Dose: two to four, three times a day. They rectify acidity and wind in the stomach, and regulate the bowels.

Anti-spasmodic Tincture.—Lobelia seed, powdered, one pound; valerian and cayenne, of each four ounces; Holland gin, one gallon—infuse ten days, closely stopped, shake once a day, then strain for use. Dose: a teaspoonfull two or three times a day, in fits of all kinds—hysteria, hypochondria, hydrophobia, etc.

Balmony, or Snake Head—Is an excellent bitter tonic and laxative, and is useful in costiveness, indigestion, loss of appetite, jaundice, worms, etc., given in infusions and other forms.

Bayberry.—A native of the New England States. The bark of the root is the part used in medicine; it is an astringent stimulant, is an excellent medicine for canker, also for bowel complaints, and if given freely at the commencement, is said to be a certain cure. The powder is given in teaspoonful doses, in water, sweetened; or a strong, infusion drunk freely. Taken every two or three hours.

Barberry.—The bark is the part used. It is a bitter tonic, improves the appetite, acts on the liver. Is taken in powder or infusion, similar to golden seal.

Bethroot, Wake Robin, True Love, or Jew's Harp.—The root is the part used. It is an astringent. Useful in all excessive discharges of the bowels, womb, or in bleedings internally of all kinds. The powdered root may be taken in infusion of one ounce to the pint for four doses.

Bitter Root, or Dog's Bane.—The bark of the root is the part used. It is a tonic, anti-spasmodic, and stimulant. A strong infusion, or decoction drunk in small teacupful doses, every two hours, till it operates. Cleanses the stomach and bowels, and frees from bile.

Black Cohosh, Black Snakeroot, or Rattleweed.—The root is the part used. A syrup made of its decoction is useful for coughs; and a poultice, made by thickening the decoction with slippery elm, is useful in all kinds of inflammation.

Boneset, Thoroughwort, Feverwort, or Indian Sage.—The leaves and flowers are used. It is a relaxant, sudorific, antiseptic, stimulant, diuretic, and tonic. The infusion of two ounces in one quart of boiling water, drunk freely. A teacupful every fifteen minutes (drunk warm), till it operates, will produce vomiting; for sweating, two tablespoonful doses every hour. As a tonic and laxative, a small teacupful of the decoction every two hours.

Bugle Weed, Water Hoarhound, or Betony.—Tonic, sedative and slightly astringent. It has a marked effect on the heart, reducing the velocity of the pulse. It is useful in diabetes, and will arrest bleeding from the stomach or lungs, and also will give relief in dyspeptic and all gastric derangements. It may be used in an infusion of leaves or stems, or in one to three grain doses of its active principle, Tycopin. The warm infusion aids perspiration and equalizes the circulation. It may be taken freely without producing unfavorable symptoms.

Burdock.—This a common but valuable plant. The root is used. It is an excellent diuretic, and is given in dropsies and urinal diseases, in the form of decoction. Dried root of burdock, sliced, one ounce; water, two pints, boiled down to half. This is to be taken in about six doses, in twenty-four hours, for dropsy.

Butternut, or White Walnut.—The inner bark or the root is used. It is a mild, efficacious, tonic purge, and is recommended for derangement of the liver, costiveness, worms, and dysentry, also in lingering fevers. It is given in decoction, extracts; pills, syrups, etc.

Camomile, or Chamomile.—This well-known plant is a favorite domestic remedy for sick head-ache and stomach derangements. The strong infusion, drunk warm, is emetic; taken cold, in small half-teacupful doses, is stomachic.

Camomile Pills.—Extract of camomile, four drams; camomile flowers, dried and powdered, two drams; extract of gentian, two drams; Turkey rhubarb (powdered), valarian (powdered), and best ginger (powdered), of each one dram; oil of camomile, ten drops; syrup of ginger, Q. S. Mix 170 pills. Dose: three, twice a day, as a stomachic, for headache, etc.

Canada Snakeroot, Wild Ginger, or Colt's Foot.—A tonic, stimulant, diaphoretic, and Expectorant. The root is used. As a warm stimulant and nervine; useful in affections of the lungs, colds, asthma, croup, consumption, etc. The ordinary dose is a teaspoonful, in warm water, sweetened, thrice a day.

Canker, Compound for.—Bayberry, one ounce; white pond lily, one ounce; cayenne, two drams; loaf sugar, half-a-pound—all finely powdered, sifted and mixed. Dose: half-a-teaspoonful in honey, or molasses, twice or three times a day; and a teaspoonful put in a teacupful of boiling water, to gargle with. Useful in all cases of canker in the mouth, etc.

Cayenne Pills.—Cayenne (powdered), and best ginger (powdered), of each two drams; angelica root (powdered), one dram; syrup of ginger, Q. S. Mix 100 pills. Dose: two or three twice or thrice a day, as a warm stimulant to expel wind, warm stomach, etc.

Cholera, Diarrhœa, or Dysentery, Powder for.—Bayberry, golden seal, and rhubarb, of each one ounce; cinnamon and dried peppermint, of each half-an-ounce; saleratus, two drams; powdered myrrh, one dram; loaf sugar, three ounces—all well powdered, sifted, and mixed. Dose: put a teaspoonful of the powder in half-a-teacupful of hot water, add two teaspoonfuls of loaf sugar—when cool enough give two or three tablespoonfuls every fifteen minutes, till the looseness, etc., is stopped; and relief is got; or—

Cholera, Diarrhœa, or Dysentery, Powder for.—Powdered catechu, six ounces; stomach bitters powder and best ginger, of each three ounces; cinchona bark and cinnamon, of each two ounces; valerian, cloves and cayenne, of each one and a-half ounces; bayberry, and myrrh, of each one ounce—well powdered, sifted, and mixed. Dose: a teaspoonful in a cup of ginger tea, every ten minutes till relief is got.

Cholera, Diarrhœa, or Dysentery, Decoction or Syrup for.—Green peppermint, two ounces; bayberry, one ounce; white pond lily root, one ounce; water, three pints—boil down to two pints, and strain—pour the boiling liquor on the following ingredients: Powdered rhubarb, one ounce; powdered myrrh, two drams; saleratus and cayenne, of each one dram; loaf sugar, three ounces; when cold, bottle, and add best brandy, or rectified spirit of wine, four ounces. Dose: take half a wine-glassful every two hours, till relief is got.

Colic, Remedy for.—On two teaspoonfuls of composition powder, pour one pint of boiling water, stir together; when cool, add of tincture of myrrh and tincture of ginger, of each two drams. Give a wine-glassful of this every ten or fifteen minutes. Apply a hot bran poultice to the part where the pain is, and administer an enema. This course will mostly relieve.

Composition Powder.—1. Bayberry, two pounds; ginger, one pound; cayenne, cinnamon, and prickly ash, of each two ounces; or—2. Bayberry, three pounds; ginger, one and a-half pounds; cayenne and cloves, of each three ounces; or—3. Bayberry, six ounces; ginger, two ounces; pinus canadensis, cloves and cinnamon, of each half an ounce; cayenne, two drams; or—4. Bayberry, eight ounces; poplar bark and ginger, of each four ounces; cloves, one ounce; cinnamon, half an ounce, cayenne, two drams. Whichever is taken, it must be finely powdered, sifted, and well mixed. They are stimulant, carminative, tonic, and nervine. The dose is a teaspoonful in a cupful of warm water sweetened and made to palate, with milk or cream, and taken two or three times a day, when needed.

Comfrey.—The root is used. It should be collected in early spring or late in the fall, cut into pieces, dried, and kept from damp air, as it deteriorates by long keeping. It is useful in coughs, consumption, dysentery, soreness of bowels, etc. Given in strong infusion or powdered root, in half teaspoonful doses.

Conserve Stimulating, or Bread of Life.—Golden seal, prickly ash, poplar bark, and cinnamon, of each two ounces, cayenne, one ounce; loaf sugar, four pounds—all finely powdered and well mixed, kneeded to a stiff dough with mucilage of slippery elm adding oil of pennyroyal and peppermint, of each two drams; made into cakes of convenient size, and dried. May be eaten freely. Is useful for coughs, colds, hoarseness, and as a stomachic stimulant.

Consumption, Powder for.—Stomach bitters, cough powder, and diabetes powder, of each four drams. Mix. Take a teaspoonful in a teacupful of hot water three times a day—taking cough pills and syrup also.

Cough Drops, or Syrup.—1. Lobelia herb, four ounces; hoarhound, comfrey, and elecampane, of each two ounces; boneset, four ounces; water, three quarts; boil to three pints—strain; add two pounds of loaf sugar, and one pint of Holland gin. Dose: two teaspoonfuls every hour, in asthma, croup, consumption, etc. 2. Hoarhound, hyssop, polypoddy root, coltsfoot, linseed, elecampane, and licorice, of each one ounce; aniseed, half an ounce; water, three pints, boil down to two—strain; add best molasses, two pounds; acid tincture of lobelia, four ounces. Boil slowly twenty minutes—skim—then add when cold, tincture of ginger, one ounce; oil of mint, one dram (put together these two to dissolve oil). Dose: from one teaspoonful to four tablespoonfuls four times a day, for coughs, consumption and most diseases of the lungs and bronchial tubes.

Cough Pills.—Gum ammoniac, one ounce; extract of lobelia, lobelia herb, cayenne, elecampane, and aniseed (powdered), of each two drams—dissolve the gum and extract in a little hot water, then add the other ingredients in powder—mass with mucilage of gum arabic, Q. S. Mix 270 pills. Dose: one to three pills twice or thrice a day, in all kinds of coughs.

Cough Powders.– 1. Slippery elm, ounce; lobelia herb, prickly ash, skunk cabbage, wake robin, and valerian, of each half an ounce; cayenne, one dram—powder well, and mix. Dose: half a teaspoonful in hot water, sweetened, every three hours, for all coughs. consumption, etc. 2. Elecampane, licorice powder, and skull cap, of each one ounce; polypoddy, angelica, and ginger, of each two drams; lobelia herbs and aniseed, of each one dram—powder and mix. Dose: a teaspoonful, same as composition powders, for coughs, hoarseness, etc.

Cramp of Stomach, Remedy for.—Spasmodic powder, a teaspoonful; pour on to it half a pint of boiling water, sweeten, let it settle, when cool, strain. Put ten drops of oil of mint into an ounce of tincture of ginger—mix with the infusion. Give a tablespoonful every ten minutes till relief is got.

Croup, Syrup for.—Lobelia, ginger, and cayenne, of each half a dram; sugar, half a pound; boiling water, one pint—pour on, stir till sugar is dissolved, leave to settle—mix oil of peppermint, one dram, with tincture of myrrh, one ounce—mix with the other. Dose: from a tea to a tablespoonful, according to age, half hourly, till relief is got.

Curative Powder.—Composition powder, one ounce; barberry bark, half an ounce; white poplar bark, skunk cabbage, and dandelion root, of each two drams; cloves, two scruples; cayenne, one scruple—all well powdered and mixed. Useful in stomach and liver complaints. It may be taken similarly to composition powder, two, three, or four times a day.

Diabetes, Powder for.—Bistort root, two ounces; comfrey root, Peruvian bark, and golden seal, of each one ounce; white resin and tormentil root, of each half an ounce—all well powdered and mixed. Dose: a teaspoonful three times a day, in anything convenient.

Diuretic Powder.—Buchu leaves, one and a half ounces; parsley root and uva ursa, of each one ounce; kercuma and blue flag root, of each half an ounce; dandelion root and dwarf elder, inner bark, of each two drams; cayenne, one dram—powder all and mix well, then add oil of juniper, thirty drops. Taken same as composition powder, twice or thrice a day, for bladder affections, dropsy, etc.

Dock Ointment.—Sharp dock root, fresh got, sliced and bruised, one pound; pinus canadensis, two ounces; mutton suet, clarified, four ounces; lard; one and a half pounds—simmer all together on a slow fire two hours—strain, stir till cold. Useful for scurvy, scrofula, itch, etc.

Dropsy, Decoction for.—Blue flag root, parsley root, ginger, and juniper berries, of each one ounce; dwarf elder and buchu leaves, of each half an ounce; bruise roots and berries—boil in two quarts of water down to three pints; then add elder and buchu—boil ten minutes longer, strain and press out. Take half a wine-glassful four times a day along with the diuretic powder and gravel pills, living well on dry, stimulating food.

Dropsy, Powder for.—Queen of the meadow root and parsley root, of each one and a half ounces; buchu leaves, one ounce; uva ursa, ginger and cinnamon, of each half an ounce—powder and mix well. Taken same as composition powder, twice or thrice a day, in dropsy and bladder affections.

Elm Poultice.—Slippery elm, two teaspoonfuls; lobelia herb and ginger, of each one teaspoonful—mix well with warm water. Useful in all cases of pain and inflammation.

Emetic Powder.—Lobelia herb, lobelia seed, and cayenne, of each two ounces; bayberry and valerian, of each one ounce—all finely powdered and well mixed. Dose: put four teaspoonfuls in a cupful of hot water—leave to settle. Give four teaspoonfuls of the tea every ten minutes, until it operates freely as an emetic.

Erysipelas, or St. Anthony's Fire, Decoction for.—Yarrow, boneset, figwort, wood sage, meadow sweet, and composition powder, of each half an ounce; water, two quarts, boil down to three pints—strain—sweeten with

coarse sugar to taste. Dose: a wine-glassful every ten minutes till the patient sweats freely, and the slippery elm poultice may be applied to the painful part —will soothe the irritation.

Excess of Menstruation, or Floodiug, Remedy for.—Archangel crane's bill, meadow sweet, raspberry leaves, and bistort root (bruised), of each one ounce; cloves (bruised), two drams; water; three pints, boil down to one quart—strain, and add whilst hot, female restorative powder, half an ounce, and stomach bitters, two drams—boil a few minutes, strain through muslin. and add white sugar, half a pound. Take a wine glassful four times a day; half an hour before meals.

Females, Cordial for.—Partridge berry vine, three ounces; high cranberry, unicorn root, and blue cohosh, of each one ounce; water, two quarts, boil down to one—strain, and fine sugar, half a pound; best brandy, twelve ounces. Given to pregnant females about a fortnight before the expected time of confinement; it strengthens much both mother and child. Dose: from half a wine-glassful to a whole one, twice during the day, and at bed-time in a little warm water—it eases during labor.

Female Corrective Pills.—Germander and tansey flowers (dried and powdered), unicorn root, myrrh, and socotrine aloes, of each two drams; cayenne, one drams; oil of mint, pennyroyal, and thyme, of each five drops; strong infusion, or juice of mugwort, Q. S. to mix with—165 pills. Two night and morning. Are very useful in female obstructions, or suppression of menses.

Female Restorative Pills.—Kino, white resin, bistort root, myrrh, socotrine aloes and cloves, of each two drams; tincture of kino, Q. S.—mix 180 pills. Dose: two taken twice or thrice a day for profuse menstruations, whites, etc.

Female Corrective Powders.—I. White poplar bark and bayberry, of each one ounce; ginger, six drams; cloves, cinnamon and golden seal, of each four drams; myrrh, two drams; cayenne, one dram—all finely powdered and well mixed. A teaspoonful taken four times a day—in pennyroyal, feverfew, tansey tea, or the like—in obstruction of menses, and similar diseases; or— II. Myrrh, tansey flowers, unicorn, and cayenne, of each four ounces; socotrine aloes, four drams—finely powdered, sifted, and well mixed. Dose: half a teaspoonful three or four times a day, in honey or molasses, in obstructed or suppressed menses.

Female Restorative Powders.—I. Poplar bark, comfrey root, and tormentil root, of each two ounces; marsh-mallow root, white pond lily, balmony, and cloves, of each one ounce; catechu and bistort root, of each four drams; cayenne, two drams—all powdered and sifted. Dose: a teaspoonful in a teacupful of hot water, sweetened, two, three, or four times a day, in whites, excessive menstruation and general debility. II. Poplar bark, eight ounces; witch hazel leaves, one and a half ounces; bethroot, one and a half ounces; cloves and cinnamon, of each one ounce; cayenne, six drams; loaf sugar, one pound—powder and mix. Dose: a teaspoonful in half a teacupful of warm water three times a day, for all female relaxations, weaknesses, bearings down,

whites, and excessive menstruations. III. Comfrey root, two ounces; elecampane, two ounces; white resin, one ounce; fine sugar, eight ounces—powder and mix. Dose: a teaspoonful once a day, in hot water. An excellent remedy against whites, etc.

Female Restorative Strengthening Syrup.—I. Comfrey root, marsh-mallow root, poplar bark, bistort root, white pond lily, cloves, and ginger, of each one ounce; water, two quarts, boil down to three pints—strain—add loaf sugar, one pound—boil ten minutes and skim; then add French brandy, one pint; or—II. Comfrey root, four ounces; elecampane root, two ounces; hoarhound, one ounce; water, three quarts, boil down to three pints—strain, and add powdered bethroot, half an ounce; loaf sugar, one pound; brandy, one pint. Dose: three or four tablespoonfuls three or four times a day, in whites, bearings down, general debility, barrenness, etc.

Fevers, Remedy for.—Clear the stomach and bowels with a few doses of Indian pills, or some other medicine, then make the following decoction: Take boneset, vervain, yarrow flowers, angelica herb, and meadow sweet, of each one ounce; water, two quarts, boil down to three pints—then strain, and add powdered angelica root, four drams; powdered crawley root, two drams; cayenne, one dram—boil ten minutes longer—strain. Let the sufferer have a warm or vapor bath, then go to bed, taking four tablespoonfuls of the above decoction every hour till perspiration is excited. When the fever is overcome, and the symptoms removed, let the following be taken:

Fever, Tonic Decoction for after.—Angelica, centuary, agrimony, hoarhound, meadow sweet, camomile, and juniper berries, of each one ounce; water, five pints, boil down to three—strain—add golden seal, myrrh, and composition powder, of each two drams—boil ten minutes longer—strain—add rectified spirit of wine, or brandy, twelve ounces. Dose: a wine-glassful four times a day.

Flax, Common.—The seed is used in medicine under the name of linseed; also the oil expressed therefrom. The infusion of the seeds, or linseed tea, is a very useful demulcent in coughs, colds, strangury, and bladder affections. The meal made of the seeds is used for poultices, etc., and the oil in ointments, liniments, etc.; or, if taken inwardly, it purges gently, and may be taken as follows:

Flaxseed, Emulsion of.—Linseed oil, two ounces; yolks of four eggs—mix together—then add tincture of rhubarb and tincture of ginger, of each four drams, syrup of buckthorn, one ounce; peppermint water, to make up twelve ounces—stir till well mixed. Dose: two or three tablespoonfuls at night, or early in the morning, is very useful in habitual costiveness.

Fumitory.—Useful against scurvy and liver complaints, jaundice, and the like. The juice is best, but a strong decoction will answer.

Fumitory, Compound Decoction of.—Fumitory, dandelion roots, and liquorice, of each two ounces; water, two quarts, boil down to one quart. A teacupful night and morning, for scurvy, liver affection, jaundice, and to remove visceral obstructions generally.

Ginger, Syrup of, Compound.—Ginger, sliced and bruised, one ounce; angelica root, sliced and bruised, half an ounce; peppermint, half an ounce: boiling water, one pint—infuse in a warm place an hour—strain it, press off, add sugar, two pounds—simmer and strain. Dose: a tablespoonful when required. Is useful for a pain in the stomach, wind, colic, and the like.

Golden Seal, or Yellow Puccoon.—The root is used. It is a bitter stimulant tonic. Useful in debility, indigestion, etc. A strong decoction is used as a stimulant wash to sore eyes, old sores, ulcers, etc.

Gonorrhœa, Pills for.—Canada balsam of fir, one ounce; oil of cubebs thirty drops; liquorice root, Q. S., to mass with, divide into five grain pills. Two taken three times a day.

Gravel and Stone, Decoction for.—Pareira brava root, blue flag root, dandelion root, of each one ounce, sliced and bruised, juniper berries, bruised, one ounce; dwarf elder, with carrot, and parsley piert, of each half an ounce; golden seal root, half an ounce; water, two quarts. boil in it roots and berries till reduced to three pints, then add the herbs, boil ten minutes longer, strain, and press off, mix one ounce of compound spirit of horse-radish with oil of juniper, one dram, and when the decoction is cold put them in it. Dose: a wine-glassful four times a day.

Gravel and Stone, Pills for.—Extract of dandelion, parsley root, buchu leaves, and wild carrot, of each half an ounce; oil of juniper, one dram; balsam of fir, Q. S., mix, divide into five grain pills. Dose: two three times a day, with the above decoction, is very useful.

Headache Snuff.—Bayberry and sassafras bark, of each one ounce; blood root, half an ounce—powder and mix. Dose: a pinch to be taken occasionally.

Healing Salve.—Beeswax, common terpentine, balsam of fir, and fresh butter, of each two ounces—melt, simmer gently, and stir till cold. To dress sores with.

Healing Cleansing Salve.—Burgundy pitch, six ounces; ripe onions, sliced, and molasses, of each four ounces; lard, six ounces; beeswax, six ounces; boil over slow fire about half an hour, strain, and add olive or linseed oil, two ounces; stir till cold. This is a useful stimulating dressing for sluggish ulcers and sores.

Healing Salve, Burgundy Pitch.—Hog's lard and clarified mutton suet, of each four ounces; beeswax, and olive or linseed oil, of each two ounces; simmer all together in a water bath or oven—stir till cold. Very useful after burns, scalds, etc.

Healing Softening Salve.—Linseed or olive oil, four ounces; white wax, two ounces; spermaceti, one ounce; balsam of fir, half an ounce—melt together, and stir till cold. Useful for sore nipples, chapped hands or face, to anoint with.

Healing Drawing Plaster.—Mutton suet, clarified, four ounces; white resin, brown sugar, and brown soap, of each half an ounce—simmer all together

—strain and stir till cold. Is a useful dressing for sore legs, sluggish ulcers, etc. Wash over with tincture of myrrh, and dress with this twice a day. Is said to have worked wonders.

Hemlock Tree.—The bark is used. It is called the *pinus canadienses.* It is an astringent stimulant. An essential oil is extracted from it which is used in combinations to rub with in rheumatisms, etc., etc.

Hepatic, or Liver Pills.—I. Extract of dandelion, four drams; socotrine aloes and best flour of mustard, two drams; cayenne, one dram; mucilage of gum arabic, Q. S.—mix 135 pills. II. Blood root, golden seal, and socotrine aloes, of each two drams; kircuma and mandrake, of each one dram; extract of dandelion, four drams; syrup of ginger, Q. S.—mix 180 pills. Either of these is useful for chronic affections of the liver, jaundice, etc. Dose: two twice or thrice a day.

Hysteria, Hypochondriac, or Nervine Pills.—I. Assafœtida, half an ounce, powdered valerian, myrrh, and socotrine aloes, of each two drams; mucilage of gum arabic, Q. S.—mix 150 pills. II. Assafœtida, four drams; skull cap and valerian, of each two drams; rhubarb, myrrh, socotrine aloes, and cayenne, of each one dram; syrup of rhubarb, Q. S.—mix 195 pills. These are good for all nervous and spasmodic diseases, low spirits, and the like. Dose two night and morning.

Indian Pills.—I. Lobelia seed, cayenne, valerian, and extract of dandelion, of each four drams; slippery elm, two drams; mucilage of slippery elm, Q. S.—mix 270 pills. Dose: one, two, or three at night, in constrictions, headache, fevers, and liver complaints, II. Extract of butternut, powdered rhubarb, and golden seal, of each, two drams; lobelia seed, cinnamon, and cayenne, of each one dram; socotrine aloes, half a dram; slippery elm, four drams; mucilage of gum arabic, Q. S.—mix 200 pills. Useful purgative. III. Rhubarb and socotrine aloes, of each six drams; tumeric and ginger, of each four drams; lobelia herb, one dram; cayenne, half a dram; syrup of ginger, Q. S.—mix 320 pills. A purgative. These two latter are useful forms of pills for all biliary obstruction, indigestion, flatulency, and most stomach complaints where purgatives are needed. Dose: one or two twice a day until they operate freely.

Indigestion, Tonic Draught for.—Tansey, wormwood, quassia chips, barberry bark, sweet flag root, and buchu leaves, of each two drams; water, three pints, boil down to two—strain, then add cayenne, ten grains; Spanish juice, broken, one ounce—simmer till juice is dissolved—strain—bottle for use. Three tablespoonfuls thr tim s a day.

Inflammation of Eyes, Lotion for.—Green tea, ground ivy, and raspberry leaves, of each half an ounce; water, one and a half pints, boil down to a pint, and strain. When cold, add tincture of myrrh, one ounce. Bathe the eyes with this three times a day.

Inflammation of Stomach, Decoction for.—Marsh-mallow root and comfrey root, of each one ounce; raspberry leaves and ginger, of each half an ounce; water, three pints, boil down to a quart, and strain—then add cayenne, one dram—sweeten to taste. Give a small teacupful frequently to provoke perspiration. Take tonics after.

Inflammation of Bowels, Decoction for.—Peppermint yarrow, and queen-of-the-meadow, of each one ounce; camomile and ginger, of each half an ounce; water, three pints, boil down to a quart, strain, and whilst hot, pour the liquor on to composition powder and cinnamon powder, of each two drams—leave to cool and settle. Put oil of peppermint, twenty drops, essence of camphor, ten drops; and tincture of myrrh, four drams—when oil is dissolved mix with the liquor—bottle for use. Dose: two to four tablespoonfuls half-hourly, till perspiration is produced.

Inflammation of Kidneys, Decoction for.—Dwarf elder, juniper berries, yarrow, buchu leaves, and golden rod, of each one ounce; water, two quarts, boil down to three pints—strain. Pour it on to diuretic powder, half an ounce; cayenne, five grains—sweeten. Take three or four tablespoonfuls till perspiration is excited freely.

Inflammation of Liver, Acute, Decoction for.—Meadow sweet, yarrow, and summer savory, of each one ounce; water, three pints; boil twenty minutes, strain. Add cayenne, thirty grains. Dose: a wine-glassful every ten minutes till perspiration is excited.

Inflammation or Liver (Chronic or Liver Complaint), Decoction for.—Barberry bark, agrimony, meadow sweet, buckbean, dwarf elder, and hoarhound, of each half an ounce; water, three pints, boil down to a quart—strain. Put into the liquor extract of dandelion, curative powder, kircuma and Spanish juice, broken, of each half an ounce—boil five minutes longer, strain, bottle for use. A wine-glassful taken four times a day, taking at the same time the liver pills and curative powders.

Inflammation of the Lungs, Decoction for.—Hyssop, summer savory, and vervain, of each one ounce; cough powder, lobelia syrup, and Spanish juice, broken, of each half an ounce; cayenne, thirty grains; water, three pints—boil the herbs till reduced to a quart, then strain. Add the other ingredients, boil five minutes longer, strain. A wine-glassful taken every ten minutes till perspiration is excited, applying externally a stimulating poultice, or the like.

Injection Powder.—Bayberry and lobelia herb, of each four ounces; slippery elm and valerian, of each two ounces: cayenne, one ounce; all finely powdered and mixed. To use: two teaspoonfuls infused in six ounces of hot water, injected when about blood warm. A stimulant enema.

Itch, Wash for.—Tincture of myrrh and tincture of lobelia, of each eight ounces; spirit of turpentine, four ounces—mix. Apply all over the body night and morning.

Jaundice, Decoction for.—Barberry bark and dandelion roots, of each one ounce; kircuma root, centuary, gentian, and dwarf elder, of each half an ounce—boil roots and bark in two quarts of water, down to three pints—then add herbs—boil ten minutes longer, strain and pour whilst hot upon golden seal, powdered, half an ounce; cayenne, one dram; Spanish juice, broken, one ounce; when juice is dissolved, bottle for use. Dose: four to six tablespoonfuls three times a day, with liver pills.

Liniment for Gathered Breasts.—Linseed oil, eight ounces; olive oil, two ounces; camphor, half an ounce, dissolve camphor with olive oil, then mix with the other oil. Apply on a cloth, frequently wetting it with the oil.

Liniment of Camphor.—Olive oil, eight ounces; ripe onions, sliced, half an ounce; simmer oil and onions together five minutes, strain, and add camphor, two ounces, rub till dissolved. Is very useful to rub the throat with in quinsies, and applied to scrofulous swellings and tumors.

Liniment for Cramp, etc.—Whiskey or rum, eight ounces; cayenne, half an ounce, heat spirit, then pour on the cayenne. Cloths dipped in this applied to the affected part, as on the body in cholera cases, will speedily give ease.

Liniment of Hartshorn.—Spirit of hartshorn, two ounces; sweet oil, eight ounces; cayenne, one dram—mix, cork up, and shake daily for a week. Useful for sprains, bruises, etc.

Lobelia, Pills of.—Extract of lobelia, lobelia herb, powdered, and liquorice powder, of each, four drams; cayenne, two drams; mucilage of gum arabic, Q. S.—mix 420 pills. Dose: one to three, three times a day, in asthma, etc.

Menstruation, Retained, Obstructed, or Suppressed, Decoction for.—Germander, mugwort, southernwood, pennyroyal, feverfew, tansey, blessed thistle, and female corrective powder, of each half an ounce; water, two quarts, boil down to three pints, strain and press off; then add Spanish juice, broken, one ounce, stir till dissolved, then add essence of pennyroyal, one dram. Three tablespoonfuls to be taken four times a day with the female corrective at the same time.

Palpitation of the Heart, Decoction for.—Black hoarhound, motherwort, rue, blessed thistle, and mugwort, of each one ounce; water, two quarts, boil down to three pints—strain, and add whilst the liquor is hot, skullcap and spasmodic powder, of each two drams—mix well together. Take three tablespoonfuls four times a day, taking the nervine pills.

Piles, Decoction for.—Marsh-mallow root, bistort root, comfrey root, white poplar bark, crane's bill, and yarrow, of each one ounce; cloves and cinnamon, of each two drams; water, two quarts—bruise the roots and boil in the water twenty minutes, then add the herbs, cloves, and cinnamon—boil ten minutes longer, strain. Sweeten with sugar. Take a wine-glassful four times a day, using one of these ointments.

Piles, Ointments for.—I. Hemlock bark, finely powdered, one ounce; fresh lard, six ounces, mix well. Apply to the part. II. Yarrow flowers and raspberry leaves, of each one ounce; hemlock bark, two drams; lard, half a pound, simmer together half an hour, strain and press off, and stir until cold. Very useful applied to the piles three or four times a day.

Pluerisy Root or Butterfly Weed.—The root is used. It is diaphoretic, expectorant; and anti-spasmodic, and is therefore useful in coughs pleurisy, colic, flatulence, and to promote perspiration. It may be given in decoction, or powder, a teaspoonful at a dose, in some warming herb tea every two hours. till relief is got.

Poplar.—The bark of this well-known tree, especially the tremulous kind, contains many valuable properties similiar to Peruvian bark and willow bark, and may be given in similiar forms and for similiar purposes as Peruvian bark, but in rather larger doses. Its qualities are bitter, diuretic, astringent, tonic, and slightly stimulant.

Poultice for External Inflammations.—Ripe onions, boiled to pulp, one pound; bran, Q. S. for a poultice—pour the onions and liquor they have been boiled in on to the bran whilst hot. Mix well and apply. A very useful poultice.

Poultice, Stimulating, for Internal Inflammations.—Mustard flower and ginger, powdered, of each four drams; cayenne, two drams; oatmeal, two ounces—mix till dry; then add boiling vinegar, Q. S. for a poultice. Apply to the part from ten to thirty minutes, dress after with pure lard or simple ointment.

Poultice for Soothing and Softening.—Slippery elm bark, powdered, one ounce; marsh-mallow leaves, cut into pieces, one ounce, linseed meal, Q. S. for a poultice. Boil the leaves in water, mix in the powder and meal, grease with lard and apply. Useful for scrofulous swellings, gathered breasts, and hard inflammatory swellings.

Prickly Ash, Toothache Bush, or Yellow Wood.—The bark and seed vessels are used. They are diaphoretic and stimulant, used in rheumatic fever and ague. It is given in the form of powder in ten or twenty grain doses every three or four hours. Also, in form of decoction thus made: bark of prickly ash, bruised, one ounce; water, two pints—boil twenty minutes and strain. Dose, warm: one to two teacupfuls every four hours.

Queen of the Meadow, or Gravel Root.—The root of this plant is used. It is a powerful diuretic, useful in all obstructions of the urinary organs. Used in strong decoction, drunk freely.

Quinsy, or Inflammatory Sore-throat, Decoction for.—Raspberry leaves, hyssop, red sage, summer savory, hoarhound, and ground ivy, of each half an ounce; water, three pints—boil twenty minutes, strain whilst hot on to ten grains of cayenne; when cold add tincture of myrrh and acid tincture of lobelia, of each half an ounce. Dose: three or four tablespoonfuls every hour, fomenting and gargling, till relief is got.

Red Raspberry.—The leaves of this well-known fruit possess valuable astringent properties, useful in bowel complaints; also a wash for sore nipples. Used in strong infusion and drunk freely. The fruit made into raspberry vinegar forms, with water, a pleasant, cooling drink in fevers, and is anti-scorbutic.

Rheumatic, Liniment for.—Cayenne, two drams; bay salt, one ounce; best vinegar, one pint—boil the vinegar, pour on the cayenne and salt, shake together, leave to cool. Dissolve one dram of oil of organum in one ounce of tincture of myrrh—put in the vinegar, etc., when cold. Useful stimulant to rub with in rheumatism, palsy, tic doloreux, etc. To be rubbed with or applied on a cloth.

Scrofula or Scurvy, Purifying Powder for.—Sarsaparilla, powdered, and wintergreen, powdered, of each four ounces; dock root, powdered, dandelion root, powdered, sassafras root bark, powdered, uva ursa, and ginger, of each two ounces; cloves, one ounce—all to be finely powdered, sifted, and mixed. A teaspoonful taken three times a day in fumitory or dandelion tea. Is excellent in all skin diseases and as a purifier of the blood.

Scrofula or Scurvy, Purifying Decoction for.—Yellow dock root, dandelion root, sarsaparilla, and winter green, of each two ounces; blue cohosh, one ounce; water, four pints, boil down to three pints—strain; when cold add Holland gin, one pint. Dose: a wine-glassful to be taken once a day as a gentle purifier.

Scrofula or Scurvy, Alterative Purifying Powder for.—Sarsaparilla and ginger, of each one ounce; rhubarb, burdock, wintergreen, and dandelion root, of each half an ounce—powder all well, and mix.

Scrofula or Scurvy, Purifying Powder for.—Sassafras bark, rhubarb, comfrey root, and dock root, of each one ounce; sarsaparilla and cubebs, of each half an ounce; cayenne, two drams—all finely powdered, sifted and mixed. Dose: a tablespoonful in about three-quarters of a pint of boiling water. Sweeten to taste and take a teacupful occasionally in all skin diseases, gonorrhœa gleets, etc., etc.

Scrofula, or Anti-venereal Powder.—Diuretic powder, four ounces; cubebs, sassafras root and mandrake, of each two ounces; gum guiacum, prickly ash, and sarsaparilla, of each one ounce; lobelia herb and gum kino, of each four drams, powder all and mix, then drop in ten drops each of oil of juniper, oil of rosemary, and balsam of copaiba—rub till well mixed. Dose: a teaspoonful three or four times a day in a little water. Useful in skin diseases, gleets, gonorrhœa, and most venereal cases.

Scrofula, Scurvy, or Anti-venereal Pills.—Blue flag root, one ounce; lobelia seed, four drams; mandrake, mezerion root, and cayenne, of each two drams; water, one and a half pints—boil on a slow fire down to a pint—strain off and express the juice, evaporate slowly to proper consistence for pills, then mix in extract of sarsaparilla, four drams; add tincture of myrrh and liquorice powder, Q. S. for pills—one dram must be divided into twelve pills. Dose; one three times a day is useful in all impurities of the blood and fluids; also in all venereal affections.

Scrofula, Scurvy, and Anti-venereal Syrup.—Sarsaparilla, four ounces; guiacum chips, three ounces; blue flag root, liquorice and dog mercury, of each, one ounce; prickly ash bark, four drams; water, three pints, boil down to two pints—strain off and express, then add loaf sugar, two pounds, simmer and skim—when cold, pour off the clear syrup. Dissolve oil of sassafras, two drams, in one ounce of tincture of myrrh, and add to the syrup. Three tablespoonfuls taken with the preceding pills is excellent in all impurities of the blood, skin diseases, venereal affections, etc.

Scrofula, Scurvy, and Anti-venereal Ointment.—Lard, one pound; mutton suet, four ounces; mandrake root, bruised, two ounces; mezerion

bark, one ounce; blood root, powdered, and prickly ash, bruised, of each two drams; lobelia seed, one dram—simmer all together on a slow fire for an hour—then strain and press off. A useful ointment for all venereal sores, chancres, etc., as well as scurvy sores.

Skullcap, Hoodwort, or Blue Pimpernell.—This herb is a tonic, anti-spasmodic, and nervine. Useful in all nervous affections. The warm effusions may be drunk freely, or a heaped teaspoonful of the powdered leaves, with as much sugar, put into a teacupful of boiling water and taken for dose. Repeated three or four times a day as may be needed.

Skunk Cabbage.—Dracontium, narcotic, stimulant, anti-spasmodic and expectorant. Useful in chronic, rheumatism, asthma, chronic catarrh, whooping cough, hysteria, and dropsy. In large doses, it causes vomiting, vertigo, and dimness of sight. Dose of the powders 5 to 15 grains, of the fluid extract 20 to 60 drops.

Slippery Elm.—The bark of this tree is very useful as a softening demulcent in coughs, bowel complaints, strangury, sore throats, etc, It may be taken in infusion, and externally is used in poultices for cleansing and healing foul sores.

Soap Wort, or Bouncing Root.—A decoction of this herb, prepared similarly to sarsaparilla, is said to be equal to that as a purifier of the blood, therefore useful in similar cases, skin diseases, jaundice, visceral obstructions, gout, rheumatism, syphilis, etc. The whole plant, root and all, are used. The dose is a wineglassful three times a day, gradually increased until a pint and a half is taken during the day.

Solomon's Seal, Seal Root or Drop Berry.—The root of this plant, bruised, is an excellent application to bruises from blows, black eyes, etc. The leaves dried and powdered possess astringent and anti-dysenteric properties; and beaten into a conserve whilst green, with sugar, is useful for whites, gleets, etc. The seeds are purgative and emetic, in doses of from twelve to fourteen grains. Whilst the leaves in small doses are astringent, in larger ones, such as half a dram of the powder, they operate as a purgative.

Spasmodic Powder.—Stomach bitters, two ounces; valerian root, powdered, one ounce; skullcap and burdock seeds, powdered, of each four drams; lobelia herb, cinnamon, powdered, and cayenne, of each two drams—sift and mix well together. Thirty grains may be taken every two hours in hot mint, pennyroyal, or yarrow tea, in cramps, spasms, convulsions, or the like.

Spiced Bitters.—I. Poplar bark, six ounces; prickly ash bark, three ounces; balmony, golden seal, ginger, and cloves, of each two ounces; cayenne, one and a half ounces; cinnamon, one ounce; fine sugar, one pound—powder all and mix; or—II. Poplar bark, golden seal and ginger, of each one ounce; balmony, cloves, and prickly ash, of each four drams; cinnamon, two drams; Turkey rhubarb and cayenne, of each one dram; fine sugar, three ounces—powder all, sift, and mix well. A tonic stomachic useful in indigestion, loss of appetite, colic, jaundice, and general debility. Dose: a teaspoonful of the powder three times a day an hour before meals, taken either dry and washed down with cold water, or in half a teacupful of warm water.

Spitting of Blood, Pills for.—Extract of henbane, two drams; powdered foxglove and powdered opium, of each one scruple—mix, divide in 40 pills. After opening the bowels take two of these pills at bed time, washing down with infusion of bramble leaves or roots, acidified with elixir of vitriol, and sweetened, or with infusion of roses.

Stomach Bitters.—I. Cayenne and golden seal, of each one ounce; saleratus, two drams—mix in powder half a teaspoonful in half a teacupful of hot water, about fifteen minutes after eating. Useful in pain of stomach caused by eating. II. Balmony, one ounce; white poplar bark, bayberry and ginger, of each one and a half ounces; cinnamon, half an ounce; cayenne, two drams—powder and mix a teaspoonful as last for indigestion. III. Poplar bark, five ounces; golden seal and barberry, of each two ounces; ginger, one and a half ounces; prickly ash, four drams; balmony, two drams; cloves, six drams; cayenne, three drams—mix well. Dose: as the preceding, and for similar purposes.

Strengthening Plaster.—Rosin, one pound; beeswax and mutton suet, of each one and a half ounces; camphor, half an ounce; brandy, two ounces; oil of hemlock, two drams—melt wax and tallow, then add camphor—stir till dissolved, then add oil of hemlock, last the brandy gradually. Useful for pains in back, sides, etc., also for rheumatism, or weakness or pain in any part where it can be applied; also for old sores, ulcers, etc.

Sudorific Powders.—Lobelia herb, skunk cabbage, pleurisy root, and crawley root, of each one ounce. Dose: fifteen to twenty grains every hour in some warming tea till perspiration is induced. Is useful in all cases of fevers, and coughs, colds, etc.

Tincture of Balsam of Canada.—Balsam of fir, one ounce; gum arabic, powdered, half an ounce—rub up with spirit gradually till dissolved—bottle for use. Dose: a teaspoonful two or three times a day in cubeb tea. Is very useful for gleets, whites, gravel, and most bladder affections.

Tincture of Burdock, etc., Compound.—Burdock seed, powdered, lobelia seed, powdered, skullcap and myrrh, of each two ounces; cayenne, four drams; prickly ash bark, two drams; spirit of wine, one quart—infuse seven days, strain. Dose: from ten drops to two drams, twice or thrice a day, in hot water, as a nervine, in all hysterical affections, delirium tremens, spasms, lock-jaw, etc.

Tincture of Ginger, Compound.—Ginger, sliced and bruised, two ounces; aniseed, powdered, one ounce; cloves, powdered, four drams; spirit of wine, one pint—infuse seven days, shaking daily, then strain. Useful carminative stomachic in wind and pain of stomach, colic, etc., in one to four teaspoonful doses, in water.

Tincture of Guiacum and Sassafras.—Gum guiacum, powdered, two ounces; sassafras root bark, powdered, one ounce; spirit of wine, one pint—infuse fourteen days, strain. A useful purifier in skin diseases, scrofula, scurvy, syphilis, and in rheumatic cases. Dose: one to four teaspoonfuls in water, or with other ingredients.

Unicorn Root, or Devil's Bit.—The powdered root of this plant is a useful tonic stimulant, given in fevers in thirty to sixty grain doses.

White Pond Lily, or Cow Cabbage.—The root of this plant is a mild astringent. Useful in diarrhœa, dysentery, etc., in teaspoonful doses, and taken in warm water sweetened.

Wine Bitters.—Poplar bark, one pound; balmony and golden seal, of each four ounces; unicorn, three ounces; cayenne, one ounce; water, ten pints, boil down to eight pints—strain—add sugar, five pounds; boil again five minutes. Infuse in three gallons of Malaga or sherry wine, three ounces of prickly ash berries, and four ounces of powdered cinnamon, for three days in a close vessel—strain off and add to the above decoction—bottle for use. A wine-glassful three times a day is useful in general debility, indigestion, loss of appetite, etc.

Worm Syrup.—Butternut bark and bitter root, of each four ounces; sage, myrrh and poplar bark, of each two ounces; water, one gallon, boil down to half—strain, add fine sugar, three pounds, and half a pint of Holland gin. Dose: four teaspoonfuls every hour till it acts freely on the bowels.

FOOD FOR INFANTS.

Starchy Food.

Arrowroot, sago, corn-starch, etc., are generally held to be healthy and nutritious for infants, yet every physician can furnish numerous instances of feeble and sickly children who have been fed on such food. The digestive organs of the infant are not sufficiently strong to convert this starchy substance into nourishment. It clogs and impedes the action of the whole system, while the little helpless victim is gradually being starved.

English "Pap."

English and French infants, when fed by hand, are almost entirely fed on "pap," made as follows:

Pour boiling water on a small piece of light white bread, cover and let it stand for a moment, then pour off the water. The softened bread is then put into a stewpan and a little more water added and allowed to come to a boil, then add a lump white sugar and a little milk. This is excellent food where the mother can only partially nurse the child.

Cow's Milk.

An exclusive diet of cow's milk is too rich for the stomach of young children. Good cow's milk may be diluted by one-half or one-third of boiling water and sweeten slightly with white sugar. Use only *one* cow's milk.

A thin, strained gruel of the best prepared barley, with a little milk and sugar added, makes an excellent change from a milk diet.

Care should be exercised not to make the food of infants too sweet, it causes thirst and disorders the stomach.

Infant's Broth.

When a baby has passed his third month, a little chicken or mutton broth is not objectionable; to prepare, cut up finely a pound of lean mutton, put into a small jar, cover with cold water, then set the jar into warm water and bring to a boil; let it simmer about six hours, strain and add a little salt, no spices.

Treat part of a chicken the same way for chicken broth.

Baby Pudding.

Grate a little stale bread, pour on boiling water until it becomes a pulp, stir in the yolk of an egg and grain of salt. This quantity should fill a teacup, in which boil it fifteen minutes.

Cookery for the Sick-Room.

Good cooking and good nursing are of paramount importance in the invalid's chamber. The improvement of the patient depends, almost if not more in some cases, upon careful nursing and properly prepared food, as upon the skillful physician.

The sick-chamber should be kept carefully ventilated, thoroughly cleansed of all foulness, and the room made as cheerful as possible.

Food is medicine, but, like drugs from the apothecary shop, it fails in its mission when improperly prepared, and often the best prepared food is spoiled by want of care and punctuality in serving.

Indian or Oat Meal Gruel.

This simple refreshment is invaluable in sickness, and is made with little trouble and less expense, yet it is very seldom prepared exactly right.

One tablespoonful of fine Indian or oat meal, mixed smooth with cold water and a little salt; pour upon this a pint of boiling water, and turn into a sauce-pan to boil gently for half an hour; thin it with boiling water if it thickens too much, and stir frequently; when it is done a tablespoonful of cream or a little new milk may be put in to cool it after straining, but if the patient's stomach is weak, it is best without either. Some persons like it sweetened and a little nutmeg added, but to many it is more palatable plain.

Arrow Root Gruel.

Add a teaspoonful of arrow root to half a pint of boiling water; mix well, add half a pint of milk and boil together for two or three minutes; sweeten to the taste. A little lemon juice or wine may be added.

Wheat Balls.

Tie half a pint of wheat flour in thick cotton, and boil it three or four hours; then dry the lump, and grate it when you use it. Prepare a gruel of it by making a thin paste, and pouring into boiling milk and water, and flavor with salt. This is good for teething children.

Panada.

Break into a bowl three good sized crackers (arrow root or oat meal are nice) broken into small pieces; pour upon them boiling water and cover close for a minute, then add a tablespoonful of white sugar and a little pure milk. It is an excellent breakfast or supper for a child or an invalid. Instead of the milk the juice of a lemon may be squeezed in and another teaspoonful of sugar added, if there is fever.

Thickened Milk.

With a little milk, mix smooth a tablespoonful of flour and a pinch of salt. Pour upon it a quart of boiling milk, and when it is thoroughly mixed, put all back into the saucepan and boil up at once, being careful not to burn, and stirring all the time, to keep it perfectly smooth and free from lumps. Serve with slices of dry toast. It is excellent for diarrhœa; this alone will often cure it by scorching the flour before mixing with the milk.

Water Gruel.

Corn or oat meal two tablespoonfuls, water one quart; boil for ten or fifteen minutes, and add sugar or salt, if desired by the patient.

Ground Rice Gruel.

Ground rice one heaping tablespoonful, ground cinnamon half a teaspoonful, water one quart; boil slowly for fifteen or twenty minutes, add the cinnamon when it is nearly done boiling, strain and sweeten.

Sago Gruel.

Sago two tablespoonfuls, water one pint, boil until it thickens, frequently stirring. Wine, sugar and and nutmeg may be used if desirable.

Suet Boiled in Rice.

Take some *rice milk* (boiled rice and milk), and boil it. When nearly boiled enough, add a dessertspoonful of beef suet, already minced as small as bread crumbs. Boil slowly for a few minutes, and take off the scum as it rises. Or the suet may be inclosed in a muslin bag. It must be eaten hot.

Milk and Eggs.

Beat up a fresh egg with a grain of salt, pour upon it a pint of boiling milk, stirring it all the time. Serve hot, with or without toast. It is good in case of weakness for an early breakfast, or for a traveller before starting on a journey.

Soft Boiled Eggs.

Fresh eggs for invalids who like them cooked soft, should be put in a pan of boiling water, and set on a part of the stove where they will

not boil for several minutes. At the end of that time they will be like jelly, perfectly soft, but beautifully done and quite digestible by even weak stomachs.

Soft Custard.

Milk, a pint. Place it to boil; while boiling, take of eggs, three; separate them, and beat up the yolks with sugar enough to sweeten to the taste, and with corn-starch, a teaspoonful, rubbed in smoothly. Then pour this egg and corn-starch mixture into the pint of boiling milk. Boil for a few minutes, and stir constantly to prevent lumping and burning. When the whole becomes a thick, creamy mass, remove. Have ready, in a dish, some stale sponge-cake, slightly wet with brandy or wine. Pour the custard over it, and cover all with the white of the three eggs whipped stiff, with a half teacupful of pulverized sugar, and flavored with vanilla.

Egg Toast.

Make a soft toast and have ready one or more fresh eggs, which have been boiled *twenty* minutes; remove the shells, cut them in slices and place upon the toast, with a little butter, pepper and salt; without the butter they may be eaten with impunity by the most delicate invalid, as an egg cooked for twenty minutes is really more easy of digestion than one that is termed "boiled soft."

Dry Toast.

Cut your slices of bread even and not too thick. Toast before a clear fire, a nice light brown. Cover with a napkin and serve quickly while it is hot. Dry toast is not always good for invalids, especially when the bowels are confined and it is desirable to keep them open. In this case Graham bread not toasted is much better.

Milk Toast.

This is a favorite dish with nearly all sick people, when they are getting well. Cut stale bread in rather thin slices, toast a fine brown and lay them in a deep dish. Meanwhile boil a quart of new milk in a lined sauce pan in which you have first put a very little cold water, to prevent burning. As soon as it boils pour it over the toast, cover and serve quick. For an invalid no butter should be put in the milk. Some people put in a thickening of flour, but this spoils it for many.

"Soft" Toast.

Some invalids like this very much indeed, and nearly all do when it is nicely made.

Toast well, but not too brown, a couple of thin slices of bread;

put them on a warm plate and pour over boiling water; cover quickly with another plate of the same size and drain the water off; remove the upper plate, butter the toast, put it in the oven one minute and then cover again with a hot plate and serve at once.

Beef Tea.

Cut up a pound of rump steak into small pieces, and put it into a bottle (wide mouthed fruit jar) putting a very small quantity of luke-warm water into the bottle with it, cork tightly and put the bottle into a kettle of warm water; the water should be allowed to boil for a considerable time; the bottle should then be removed and the juice drained off. The tea may be salted a little and a teaspoonful given at a time.

Mutton Tea.

Take one pound of mutton, remove the fat and cut the meat in small pieces; pour half a pint of boiling water over it, and let it stand near a fire for half an hour, and then boil for one hour, strain through a sieve or cloth, add salt to suit the taste. A very nourishing diet.

Chicken Tea.

Take off the skin and all the fat of the fowl, and boil it till very tender, with just sufficient water to cover it, and add a little salt. Take the chicken out of the liquor when boiled, and let the liquor remain till cold to let all the fat rise to the surface, which should then be skimmed off. The tea should be heated when given to the patient. It is a very delicate, nourishing food, and will set well on the stomach when so weak as to be able to retain but little food.

Another Beef Tea.

The latest and most approved method of making beef tea, is to take a half pound of good steak, broil slightly over hot coals; then lay into a shallow dish, and with a sharp knife, gash it on both sides until it is cut into mere shreds; then pour a half pint of boiling water over it, and scrape hard for a few moments, when all the nutriment of the beef will be extracted. This is the easiest, quickest, and by many thought to be the best method.

Flax Seed Tea.

Take an ounce of flaxseed and a little pounded licorice root and pour on a pint of boiling water; place the vessel near near a fire for four hours; strain through a linen or cotton cloth.

Oat Meal Coffee.

Mix common oat meal and water to form cake. Bake it until it is brown, then grind it in a coffee mill; take about a tablespoonful for one

pint of water and boil it five minutes. This is good for checking obstinate vomiting or distress in the stomach, when caused by drinking too much ice water.

Barley Coffee.

Roast barley until well brown, and boil a teaspoonful of it in a pint of water for five minutes; strain and add a little sugar if desired. This is a nourishing drink toward the close of fever and during convalescence.

Toast Water.

Toast slightly a piece of bread and add to it boiling water; it may be sweetened, if preferred, and flavored with a little lemon or orange peel.

Rice Water.

Take two ounces of rice and two quarts of water; boil an hour or so and add a little sugar; a little nutmeg or lemon may be used to flavor, if the patient likes it.

Apple Water.

Roast two tart apples until they are soft, put them in a pitcher, pour upon them a pint of cold water and let it stand in a cool place an hour. It is used in fevers and eruptive diseases and does not require sweetening.

Lemonade.

This is invaluable in fevers and also in rheumatic affections. Rub the lemons soft, cut them half through the center and squeeze out the juice. Take out the seeds with a teaspoon. Put two tablespoonfuls of white sugar to each lemon, and fill up with cold or boiling water according as you desire the lemonade hot or cold. Two medium sized lemons will make a pint or more.

Chicken Broth.

Take half a chicken, remove all the fat, cut the meat in small pieces and break the bones; put into a vessel with three pints of boiling water; boil for an hour, season with salt and strain.

Lamb Broth.

Stew a lamb chop in a quart of water until it comes to shreds, add a tablespoonful of barley or rice, and a little salt and onion, if desired. Strain, and add a little parsley.

Vegetable Soup.

Take two Irish potatoes, one onion and a piece of bread; place them in a quart of water, and boil down to a pint, in a closely covered vessel; add a little celery or parsley towards the close of the boiling. Salt and pepper may be employed at pleasure.

Oyster Soup.

Take of oysters, a half dozen, milk, a teacupful, with enough liquor of the oysters to make a bowl, a few allspice and cloves, a nice lump of butter, pepper and salt. Bring to a boil and skim. Then throw in the oysters and simmer. Add a few toasted crackers before removing from the fire.

Mucilage of Elm Bark.

Place about a teaspoonful of ground elm bark in a pint of cold water; this may be drank after an hour or two. If more agreeable to the patient, it may be flavored with lemon juice or essence of lemon. It is very beneficial in cases of inflammation of the stomach or bladder, etc.

Alum Whey.

Take a pint of sweet milk and add a tablespoonful of powdered alum, then boil and strain; this is useful in diarrhœa, dysentery and inflammation of the stomach. The curd forms an excellent poultice for inflammation of the eyes.

Mustard Whey.

Take a tablespoonful of mustard seed and one pint of sweet milk, boil together for a few minutes and separate the curd. This is a very useful drink in dropsy.

Vinegar Whey.

Take a pint of milk and one teaspoonful of good vinegar; boil them together for a few minutes and separate the curd.

Orange Whey.

Take a pint of milk, the juice of an orange with a portion of the peel, boil the milk then add the orange to it and let it stand until goagulation takes place, then strain.

Oat Meal Pudding.

Take a half teacup of oat meal, add one pint cold water; put into a tin dish and place the dish in a kettle of water and boil slowly for two hours, adding more hot water if necessary. Another excellent way to cook oatmeal is to steam it.

Tapioca Cup Pudding.

This is very light and delicate for invalids. An even tablespoonful of tapioca soaked for two hours in nearly a cup of new milk. Stir into this the yolk of a fresh egg, a little sugar, a grain of salt, and bake in a cup for fifteen minutes. A little jelly may be eaten with it or a few fresh strawberries.

Invalid Cup Pudding.

One tablespoonful of flour, one egg; mix with cold milk and a pinch of salt to a batter. Boil fifteen minutes in a buttered cup. Eat with sauce, fruits or plain sugar.

Invalid Apple Pie.

Slice up one or more nice, tart apples in a saucer, sweeten with white sugar and cover with a moderately thick slice of bread, buttered slightly on the under side. When the bread is nicely browned, the apples, if of a tender kind and thinly sliced, will be done.

Roast Apples.

These can nearly always be eaten with safety, when they are eaten with relish. Choose good sized, fair apples of a tart and juicy, but not of a sour kind. Rub them off clean, and put them in rather a slow oven, which may increase in warmth, so that they shall be thoroughly done in an hour. When so soft that the savory pulp breaks through the browned skin in every direction, take them out, sift white sugar over them, and carry one at a time on a saucer to the patient.

Stewed Prunes.

These are extremely good in small pox, measles, scarlet fever, and the like, both as food and medicine. Get the box prunes, as they will not need washing, and because they are generally of a much better quality than the open sort. Soak them for an hour in cold water, then put them in a porcelain lined sauce pan with a little more water if necessary and a little coffee or crushed sugar. Cover and let them stew slowly an hour, or until they are swollen large and quite soft. They are excellent as an accompaniment to breakfast for a sick woman.

Baked Partridge.

Clean the partridge as you would a chicken to roast. Fill with raw oysters, seasoned with butter, pepper and salt. Sew it up. Place in the oven, well wrapped with butter, and bake.

Broiled Oysters.

Toast some bread. Butter, and pour the liquor of oysters over the toast; set in the oven. Then broil the oysters on a small gridiron, and place them over the toast, with butter and pepper.

Panned Oysters.

Take of butter, a large piece, and put into a right hot pan. Liquor of oysters, pour into the pan; so soon as hot, add the oysters, and season light. Use no milk. A few tablespoonfuls of Maderia wine may be added just before taking from the fire.

Fever Drink.

Pour cold water on wheat bran, let boil half an hour; strain and add sugar and lemon-juice. Pour boiling water on flax-seed, let stand till it is ropy; pour into hot lemonade and drink.

Uncooked Egg.

This is quite palatable, and very strengthening, and may be prepared in a variety of ways. Break an egg into a goblet and beat thoroughly, add a teaspoon sugar, and after beating a moment add a teaspoon or two of brandy or port wine; beat well and add as much rich milk or part cream and milk, as there is of the mixture. Or, omit brandy, and flavor with any kind of spice; or, milk need not be added, or the egg may be eaten separately, stirring in lightly the well-whipped whites at the last.

Blackberry Cordial.

Put a half bushel of blackberries in a preserving-kettle and cook until scalded through well; strain, and press out all the juice; put juice in kettle with the following spices, well broken up and put into a bag; one-quarter pound allspice, two ounces cinnamon bark, two ounces cloves, and two nutmegs; add loaf sugar, about one pound to every quart of juice, or more if preferred, and cook slowly ten or fifteen minutes, remove from the fire, let cool a little, and add good pure brandy in the proportion of one pint to every three pints of juice. A smaller quantity may be made, using the same proportions. This is an excellent remedy for diarrhœa and other diseases of the bowels.

TABLE OF REMEDIES.

We give below a table of two hundred remedies; first the Latin (technical) name, then the abbreviation, followed by one or more of the common English names, with antidotes on opposite page. Read across both pages after each number.

	LATIN.	ABBREVIATION.	COMMON NAME.
1	Abies Canadensis	Abies Can	Hemlock Pine
2	Aconitum Napellus	Ac	Monk's Hood, Wolf's Bane
3	ÆsculusGlabra	Æscul G	Ohio Buckeye
4	Agricus Muscarius	Agar M	Bug agaric, Amanita
5	Agnus Castus	Agnus C	Chaste-tree
6	Alnus Rubra	Al Rub	Tag Alder
7	Alumnia	Alum	Argilla, Clay, Ox. of Alumen
8	Ambra Grisea	Ambra G	Ambergris
9	Ammonium Carbonicum	Amm C	Carbonate of Ammonia
10	Ammonium Muriaticum	Amm Mur	Muriate of Ammonia
11	Anacardium	Anac	Mallacca Bean
12	Antimonium Crudum	Ant C	Crude Antimony
13	Apis Mellifica	Apis Mell	Honey Bee
14	Aralia Racemosa	Aralia R	Spikenard
15	Argentum Foliatum	Arg Fol	Silver Foil
16	Argentum Nitricum	Arg Nit	Nitrate of Silver
17	Arnica Montana	Arn Mont	Leopard's Bane
18	Arsenicum Album	Ars Alb	Arsenic
19	Aristolochia Virginia	Aris Virg	Virginia Snake Root
20	Arum Triphylum	Arum T	Indian Turnip
21	Asafœtida	Asa	Asafœtida
22	Asarum Europæum	Asarum	Common Asarabacca
23	Asclepias Incarnata	Asclep I	Swamp Milkweed
24	Asclepias Syriaca	Asclep S	Common Milkweed
25	Atropin	Atrop	Alkaloid of Belladonna
26	Aurum Foliatum	Aurum F	Gold
27	Aurum Muriaticum	Aur Mur	Muriate of Gold
28	Baptisia Tinctoria	Bap Tinct	Wild Indigo
29	Baryta Carbonica	Baryta	Carbonate of Baryta
30	Belladonna	Bell	Deadly Nightshade
31	Borax	Borax	Biborate of Soda
32	Bovista	Bov	Puff-ball

ANTIDOTES AND DISEASES.

Following the number we give the antidotes to the medicine named under corresponding number on opposite page, followed after the dash with a few of the diseases the remedy is known to cure. The few diseases named do not, by any means, comprise all which the remedies will cure.

ANTIDOTES.	DISEASES.
1	Coffee.—Dyspepsia, palpitation of the heart.
2	Vinegar, Coffee.—Fevers, lungs, croup, heart disease, neuralgia.
3	Nux Vom.—Piles, lame back, constipation, spasms.
4	Salt, Ether.—Apoplexy, chorea, delirium tremens.
5	Wine, Coffee.—Impotence, scanty secretion of milk.
6	Sulphur.—Skin diseases.
7	Ipecac, Soda.—Leucorrhœa, lead colic, constipation.
8	Camphor.—Hysterics, hard hearing, dry cough.
9	Camphor, Lemon-juice.—Syphilis, dysmenorrhœa, epilepsy.
10	Oil, Elm Bark.—Catarrh, constipation, diarrhœa.
11	Camphor.—Weakness of mind, heart disease.
12	Mercurius, Puls.—Weakness of digestion, scald head.
13	Arnica, Onion.—Diseases of the kidneys, dropsy.
14	Cimicifuga, Nux.—Gravel, leucorrhœa, dry cough.
15	Pulsatilla, Merc.—Mealancholy, rheumatism of joints.
16	Common Salt.—Gonorrhœa, cracked nipples, epilepsy, diarrhœa.
17	Vinegar, Camphor.—Bruises, swelling of the glands, lungs.
18	Iron, Ipecac.—Diarrhœa, fever and ague, obstinate skin diseases.
19	Camphor.—Sick headache, piles, dyspepsia.
20	Onion.—Salivation, inflammation of mouth and throat, asthma.
21	Camphor.—Hysterics, dyspepsia, premature menses.
22	Vinegar, Camphor.—Colic, vomiting.
23	Pulsatilla.—Asthma, pleurisy, diarrhœa, cough, catarrh.
24	Bryonia.—Headache, dropsy, influenza, rheumatism.
25	Coffee.—Neuralgia, spasms, paralysis, whooping cough.
26	Merc., White of Eggs.—Diseases of the bones, sexual organs.
27	Nitric Acid.—Chronic catarrh, dropsy, syphilis.
28	Bryonia.—Typhoid fever, diphtheria, dysentery.
29	Soda or Magnesia in Vinegar.—Scrofulous swellings, rickets.
30	Vomit, Coffee.—Diseases of brain, nerves, glands, lungs, skin.
31	Mercurius.—Sore mouth, menses during nursing, liver spots.
32	Camphor.—Externally to stop bleeding, headache.

	LATIN.	ABBREVIATION.	COMMON NAME.
33	Bromium	Brom	Bromine
34	Spartium Scoparium	Broom	Broom
35	Bryonia Alba	Bry Alb	White Bryony
36	Chinca	Chinca	Chinca-root
37	Calcarea Carbonica	Cal Carb	Carbonate of Lime
38	Calcarea Caustica	Cal Caus	Caustic Lime
39	Calcarea Phosphorica	Cal Phos	Phosphate of Lime
40	Calendula Officinalis	Calen Off	Marsh Marigold
41	Cactus Grandiflorus	Cac Grand	Night-blooming Cereus
42	Camphora	Camph	Camphor
43	Cannabis Sativa	Cann Sat	Hemp
44	Cantharides	Canth	Spanish Fly
45	Capsicum Annum	Cap Ann	Cayenne Pepper
46	Carbo Animals	Carbo A	Animal Charcoal
47	Carbo Vegetabilis	Carbo V	Vegetable Charcoal
48	Carduus Mariæ	Cardu Mar	Common Thistle
49	Caulophyllum Thalictroides	Caul Thal	Blue Berry Root
50	Causticum	Caus	Caustic Tincture
51	Cepa	Cepa	Common Onion
52	Cerasus Virginica	Cera Virg	Wild Cherry (red)
53	Chamomilla Vulgaris	Cham	Common Chamomille
54	Cheladonium Majus	Chel Maj	Garden Celandine
55	Chimaphila Umbellata	Chim Um	Prince's Pine, Wintergreen
56	China	Chi	Peruvian Bark
57	Chloral Hydrate	Chl Hy	Chloral
58	Cicuta virosa	Cic Vir	Water Hemlock
59	Cimicifuga Racemosa	Cim Rac	Black Snakeroot
60	Cina	Cin	Worm-seed
61	Cistus Canadensis	Cist C	Rock Rose
62	Clematis Erecta	Clem	Virgin's Bower
63	Cocculus Indicus	Cocc	Seeds of Cocculus
64	Coccus Cacti	Coc Cac	Cochineal
65	Coffea Cruda	Coff	Raw Coffee
66	Colchicum Autumnale	Colchi Au	Meadow Saffron
67	Colocynthis	Col	Bitter Cucumber
68	Collinsonia Canadensis	Collin Can	Cure All, Richweed
69	Conium Maculatum	Con	Spotted Hemlock
70	Cornus Florida	Corn Flor	Dogwood, Box Tree
71	Crocus	Cro	Saffron
72	Crotalus Horridus	Crotal	Rattlesnake Poison
73	Crotonius Oelum	Crot Ole	Croton Oil
74	Cuprum Metallicum	Cup Met	Copper
75	Cuprum Aceticum	Cupr Acet	Acetate of Copper
76	Cuprum Sulph	Cupr Sul	Sulphate of Copper
77	Cypripedium Pubescens	Cyp Pub	Bleeding Heart
78	Daphne Indica	Daph	Indian Daphne

	ANTIDOTES.	DISEASES.
33	White of Egg.	—Consumption, croup, dysentery.
34	Rhus Tox.	—Nursing sore mouth, mercurial salivation.
35	Coffee, Camphor.	—Rheumatism, pneumonia, constipation, typhus.
36	Cantharis.	—Eructations, vomiting, burning urine.
37	Camphor.	—Scrofula, slow teething of infants, profuse menses.
38	Bryonia.	—Coughs, croup, ulcers, curvature of the spine.
39	Nitric Acid.	—Herpes, discharge from ear, chronic bronchitis.
40		—Wounds, colic, cancer.
41	Verat. Viride.	—Heart disease, pneumonia, fever and ague.
42	Opium, Vinegar.	—Cholera, influenza, hysterics, headache.
43	Lemonade.	—Gall stones, burning urine, nose bleed.
44	Camphor.	—Bloody urine, dysentery, kidney diseases.
45	Camphor.	—Chronic dysentery, fever and ague, dyspepsia.
46	Arsenic.	—Cancer, goitre, offensive breath or discharges.
47	Arsenic.	—Cardilagia, ulcers, burns, flatulence, dyspepsia.
48	Nux Vom.	—Jaundice, gall stones, cough, pleurisy.
49	Pulsatilla.	—False pains, tedious labor, dysmenorrhœa, colic.
50	Coffee.	—Chronic hoarseness, cold feet, insanity.
51	Coffee.	—Stings of insects, poisoned wounds, frozen parts.
52	Ammonium.	—Slow fevers, dyspepsia, ulcers, whooping cough.
53	Aconite, Coffee.	—Children's diseases, spasmodic pains, neuralgia.
54	Sulphur.	—Headache, warts, eruptions, jaundice.
55	Cantharis.	—Dropsy from disease of the kidneys, constipation.
56	Arsenic, Verat. Alb.	—For all diseases of periodic recurrence.
57	Ammonia.	—Insanity, sleeplessness, neuralgia, lock-jaw.
58	Tobacco.	—Epilepsy, mania, defective eyesight.
59	Coffee.	—Menses too profuse, chorea, rheumatism.
60	Ipecac.	—Worms, whooping cough, spasms, catarrh.
61	Belladonna.	—Foul breath, chronic diarrhœa, white swelling.
62	Mercurius.	—Orchitis, old foul ulcers, syphilis.
63	Camphor.	—Menstrual colic, sea sickness, nausea, asthma.
64	Tea, Wine, Ipec.	—Vomiting, cough, palpitation of the heart.
65	Aconite.	—Nervous diseases, cardilagia, dyspepsia.
66	Vinegar, Honey.	—Gout, burning urine, cramps of calves of legs.
67	Camphor, Coffee.	—Colic, dysentery, costiveness, neuralgia.
68	Nux Vom.	—Piles, diarrhœa, chronic constipation.
69	Coffee.	—Apoplexy, amenorrhœa, catarrh.
70	Quinine.	—Sour stomach, intermittent fever.
71	Aconite.	—Hysteria, uterine hemorrhage.
72	Arsenic, Ammonia, Spirits.	—Headache, skin diseases.
73	Opium, Mucilaginous drinks.	—Constipation, eczema.
74	Emetics, White of Eggs.	—Epilepsy, insanity, vomiting, asthma.
75	Milk, Iron Filings.	—Jaundice, colic, croup.
76	Ipecac.	—Emaciation, rage, vertigo.
77	Tea.	—Excessive mental labor, St. Vitus' dance.
78	Vinegar, Camphor.	—Itching eruptions, pains in bones.

	LATIN.	ABBREVIATION.	COMMON NAME.
79	Digitalis Purpurea	Digi	Fox-glove
80	Doryphora Ten Linæ	Dor T Lin	Colorado Potato Bug
81	Drosera	Dros	Sun-dew
82	Dulcamara	Dulc	Bitter-sweet
83	Eucalyptus Globulus	Euc Glob	Blue Gum Tree
84	Eupatorium	Eup	Boneset, Ague Weed
85	Euphorbium	Euphor	Spurge
86	Euphrasia	Euphra	Eye-bright
87	Ferrum Metallicum	Ferr	Iron
88	Ferrum Aceticum	Ferr Ace	Acetate of Iron
89	Ferrum Muriaticum	Ferr Mur	Muriate of Iron
90	Filix Mas	Fil M	Male Fern
91	Gelseminum Sempervirens	Gel Semp	Yellow Jassamine
92	Graphites	Graph	Black Lead
93	Glonoine	Glo	Nitro-Glycerine
94	Hamamelis Virginiana	Hama	Witch Hazel
95	Hedeoma Pulegioides	Hede Pul	Penny Royal
96	Helleborus Niger	Helleb	Christmas Rose
97	Hepar Sulphuris	Hep Sul	Sulphuret of Lime
98	Hydrocyani Acidum	Hy Acid	Prussic Acid
99	Hydrastis Canadensis	Hydras Can	Golden Seal
100	Hyoscyamus Niger	Hyos	Black Henbane
101	Hypericum Perforatum	Hyp Perf	St. John's Wort
102	Ignatia Amara	Ign	St. Ignatius' Bean
103	Indigo	Indigo	Indigo
104	Iodium	Iod	Iodine
105	Ipecacuanha	Ip	Ipecac
106	Iris Versicolar	Iris Ver	Blue Flag
107	Jalapa	Jalap	Jalap
108	Juglans Cinera	Jug Cin	Butternut, White Walnut
109	Kali Bichromicum	Kali Bi	Bichromate of Potash
110	Kali Carbonicum	Kali Car	Carbonate of Potash
111	Kali Hidiodicum	Kali Hi	Iodide of Potassium
112	Kreasotum	Krea	Creasote
113	Kusso	Kusso	Kusso
114	Lachesis	Lach	Snake Poison
115	Laurocerasus	Laur	Cherry Laurel
116	Ledum Palustre	Led Pal	Marsh-tea
117	Lilium Tigrinum	Lil Tig	Tiger-spotted Lily
118	Lycopodium Clavatum	Lyc	Club Moss
119	Lobelia	Lob	Indian Tobacco
120	Magnesia Carbonica	Mag Car	Carbonate of Magnesia
121	Magnesia Muriatica	Mag Mur	Muriate of Magnesia
122	Manganum	Mangan	Manganese
123	Menispermum Canadense	Menis Can	Sarsaparilla
124	Menyanthes Trifoliata	Meny	Buck Bean

	ANTIDOTES.	DISEASES.
79	Emetics, Wine, Ammonia.	—Heart disease, bloody cough, dropsy.
80	Jimson Weed.	—Vomiting, dysentery, night-mare.
81	Camphor.	—Whooping cough, consumption, cough.
82	Camphor.	—Salivation, hives, Bright's disease, hoarsenes.
83	Quinine.	—Intermittent fevers, asthma from heart disease.
84	Ipecac, Nux.	—Fevers : intermittent, spotted, remittent. Influenza.
85	Lobelia.	—Spasms, diarrhœa, cholera morbus.
86	Belladonna.	—Chronic sore eyes, opthalmia, sneezing.
87	Arsenic, China.	—Nursing sore mouth, diarrhœa, chlorosis.
88	Kreasote.	—Consumption, dropsy, excessive menstruation.
89	Pulsatilla, Arsenicum.	—Catarrh of the bladder, wetting the bed.
90	Lemon.	—Tape worms.
91	Belladonna.	—Headache, dumb ague, covulsions, after pains.
92	Nux., Wine.	—Chronic eruptions, catarrh of the ear, salt rheum.
93	Coffee.	—Sunstroke, congestive headache, nervous diseases.
94	Arnica.	—Burns, scalds, bleedings, varicose veins.
95	Turpentine.	—Nausea, whites, amenorrhœa from a cold.
96	Camphor.	—Dropsy of the brain, scanty menses.
97	Vinegar.	—Typhus, scrofula, skin, glands, profuse menses.
98	Ammonia, Cold Affusion.	—Epilepsy, apoplexy, cholera, pythisis.
99	Ammonia.	—Headache, constipation, leucorrhœa, catarrh.
100	Coffee, Bell.	—Hysterics, hydrophobia, brain fever.
101	Pulsatilla.	—Congestion of the blood to the head, painful menses.
102	Camphor, Lemon.	—Hemicrania, spinal irritation, convulsions.
103	Belladonna.	—Epilepsy, chorea, vomiting, colic.
104	Coffee, Starch.	—Goitre, enlarged glands, liver complaints.
105	Coffee.	—Vomiting, asthma, diarrhœa, fever and ague.
106	Veratrum Alb.	—Summer complaint, morning sickness.
107	Rhubarb.	—Constipation, small doses for diarrhœa of infants.
108	Mayapple Root.	—Quinsy, cramp, diarrhœa, salt rheum.
109	Iodine.	—Croup, cough, bloody catarrh.
110	Vinegar, Wine.	—Consumption, whooping cough, dyspepsia.
111	Tobacco.	—Brain fever, sore throat, goitre, cancer.
112	Milk, Mucilage.	—Diabetes, foul smelling discharges, burns.
113	Coffee.	—Tape Worms.
114	Ammonia, Arsenic.	—Fevers and convulsions.
115	Ammonia, Cold Affusions.	—Pneumonia, gangrene, apoplexy.
116	Camphor.	—Insect bites and stings, whooping cough, ague.
117	Sepia.	—Menses too profuse and too often, sterility.
118	Camphor.	—Excoriations of infants, gravel, bloating, ulcers.
119	Ipecac.	—Croup, asthma, vomiting, sick headache.
120	Table Salt.	—Menstrual difficulties, diarrhœa of pregnancy.
121	Calcarea.	—Worms, leucorrhœa, uterine spasms.
122	Coffee, Ipecac.	—Excoriating leucorrhœa, fall of the womb.
123	Bryonia.	—Liver complaints, skin diseases, dropsy.
124	Camphor.	—Malarial diseases, rheumatism.

	LATIN.	ABBREVIATION.	COMMON NAME.
125	Mephitis Putorius	Meph	Skunk
126	Mercurius Vivus	Mer Viv	Mercury, Quicksilver
127	Mercurius Solubilis	Mer Sol	Soluble Mercury
128	Mercurius Dulcis	Mer Dul	Calomel
129	Mercurius Iodide	Mer Iod	Iodide of Mercury
130	Mercurius Corrosivus	Mer Corr	Corrosive Sublimate
131	Mezereum	Mez	Mezereon
132	Morphium	Morph	Morphia
133	Moschus	Mosch	Musk
134	Muriatis Acidum	Mur Ac	Muriatic Acid
135	Natrum Carbonicum	Nat Car	Carbonate of Soda
136	Natrum Muriaticum	Nat Mur	Kitchen Salt
137	Nitri Acidum	Nit Acid	Nitric Acid
138	Nux Juglans	Nux Jug	Walnut Shell
139	Nitrum	Nit	Nitre, Saltpetre
140	Nux Moschata	Nux Mosch	Nutmeg
141	Nux Vomica	Nux Vom	Vomic Nut
142	Oleander	Olean	Oleander
143	Oleum Jecoris	Ol Jec	Cod Liver Oil
144	Oleum Ricini	Ol Ric	Castor Oil
145	Opium	Op	Opium
146	Petroleum	Petro	Rock Oil
147	Phosphori Acidum	Phos Ac	Phosphoric Acid
148	Phosphorus	Phos	Phosphorus
149	Phytolacca Decandra	Phy	Poke Root, Poke Berry
150	Platina	Plat	Platina
151	Plumbum	Plumb	Lead
152	Plumbum Aceticum	Plumb Act	Acetate of Lead
153	Podophyllum Pelltaum	Pod Pel	May Apple
154	Polygonum Punctatum	Poly Punc	Smartweed, Water Pepper
155	Pulsatilla	Puls	Wind Flower
156	Ranunculus Bulbosus	Ran B	Buttercup
157	Ranunculus Scelaratus	Ran S	Malignant Crowfoot
158	Rhododendron Chrysanth'm	Rhod	Siberian Rose
159	Rhus Toxicodendron	Rhus Tox	Poison Sumach
160	Rhus Glabrum	Rhus Glab	Common Sumach
161	Rumex Crispus	Rum Cris	Yellow Dock
162	Ruta Graveolens	Ruta G	Rue
163	Sabadilla	Sabad	Mexican Barley
164	Sabina	Sabin	Savin
165	Sambucus Nigra	Samb	Elder
166	Sanguinaria Canadensis	Sang	Blood Root
167	Scuttellaria Laterflora	Scut Lat	Skull Cap
168	Secale Coruntum	Sec	Ergot
169	Senega	Sen	Rattlesnake Root
170	Senecio Aurans	Sen Aur	Ragweed

ANTIDOTES. DISEASES.

125 Camphor.—Sick headache, hysterics.
126 Gold, Iodine.—Glands, ulcers, diarrhœa, flux, liver.
127 Nitric Acid.—Diseases of females, sore mouth and throat.
128 Chloride of Potash.—Putrid sore throat, biliousness, diseased bones
129 Hepar Sul.—Diphtheria, goitre, hardened glands.
130 White of Eggs.—Bloody flux, opthalmia, syphilis, bowel complaints
131 Mercurius, Milk.—Bones, skin, bowels, hectic fever.
132 Quick Emetics.—Used to produce sleep and relieve pain.
133 Camphor.—Hysterics, nervous headache, asthma.
134 Sulphur.—Scrofula, diphtheria, typhus, ulcers.
135 Vinegar.—Glandular swellings, scrofulous sores.
136 Nitrate of Silver.—Fever and ague, constipation, hemorrhage.
137 Camphor, Conium.—Syphilis, fistula, liver complaint, diabetes.
138 Arnica.—Boils, fever and ague, leucorrhœa.
139 Hepar Sul., Sulphur.—Dyspepsia, cardilagia, diarrhœas, gravel.
140 Caraway Seed.—Hysterics, dysmenorrhœa.
141 Emetics, Coffee.—Cramps, convulsions, neuralgia, diabetes, ague.
142 Camphor.—Paralysis, vertigo, insanity.
143 —Wasting diseases.
144 —Is a mild cathartic.
145 Coffee.—Apoplexy, mania, lead colic, hernia, sleeplessness.
146 Nux.—Weakness of the bladder, chilblains, herpes, sore throat.
147 Camphor, Coffee.—Onanism, epilepsy, diabetes, consumption.
148 Milk, Magnesia.—One of the most generally useful remedies.
149 Bloodroot.—Salt rheum, diphtheria, piles, rheumatism.
150 Pulsatilla.—Excessive menses, catalepsy, falling of the womb.
151 Opium, Alum.—Paralysis, colic, dysentery, sterility.
152 Vinegar and Magnesia.—Headache, convulsions, loss of sight.
153 Arnica.—Bilious headache, dyspepsia, colic, diarrhœa, piles.
154 Pulsatilla.—Dysentery, amenorrhœa, sprains, bruises.
155 Coffee.—This remedy is the woman's friend.
156 —External applications to old sores.
157 Camphor.—Gangrene, cancer of the stomach, dandruff.
158 Lobelia.—Chronic rheumatism, asthma, opthalmia.
159 Lobelia; internal and external.—Erysipelas, pneumonia, typhus.
160 Borax.—Rheumatism, night sweats, scurvy, bleeding, piles.
161 Belladonna.—Epistaxis, diarrhœa, colic, itch.
162 Camphor.—Worms, uterine irregularities, weak eyes from reading.
163 Cina.—Tape worm, neuralgic rheumatism, fever.
164 Elm Bark.—Miscarriage, uterine hemorrhage, dysuria.
165 —Cold in the head of infants; externally for burns.
166 Bryonia.—Sick headache, vomiting, jaundice, croup, pneumonia.
167 Coffee.—Delirium tremens, chorea, sunstroke.
168 Camphor.—Tedious labor, bloody diseases generally.
169 Arn., Bell.—Diabetes, chronic cough.
170 Pulsatilla.—Hay asthma, coryza, Bright's disease, dropsy.

	LATIN.	ABBREVIATION.	COMMON NAME.
171	Sepia	Sep	Cuttle Fish Juice
172	Silicea	Sil	Silica
173	Spigelia	Spig	Pink Root
174	Spongi Tosta	Spong	Burnt Sponge
175	Squilla Maratima	Squi	Squills
176	Stannum	Stan	Tin
177	Staphysagria	Staph	Stave's Acre
178	Stramonium	Stram	Jimson Weed
179	Sulphur	Sul	Sulphur
180	Sulphuris Acidum	Sul Ac	Sulphuric Acid
181	Symphitum Officinale	Symp	Common Comfrey
182	Tobacum	Tabac	Tobacco
183	Taraxicum	Tarax	Dandelion
184	Tartarus Emeticus	Tar Em	Tartar Emetic
185	Terebinthina Oleum	Tereb Ol	Spirits of Turpentine
186	Teucrium Marum Verum	Teu M V	Cat Mint
187	Thuya Occidentalis	Thu	Tree of Life, Arbor Vitæ
188	Triosteum Perfoliatum	Trios Perfo	White Ginseng
189	Urtica Urens	Urt U	Nettle
190	Valeriana Officinalis	Val Off	Valerian
191	Variolin	Vari	Cowpox Virus
192	Verbascom Thapsus	Verba	Mullein
193	Veratrum Album	Ver Alb	White Hellebore
194	Veratrum Viride	Ver Vir	Black Haw
195	Viburnum Prunifolium	Viburn Pru	American Hellebore
196	Vinca Minor	Vinc	Periwinkle
197	Viola Tricolor	Vio Tri	Pansy
198	Xanthoxylum Fraxincum	Xanthoxl	Prickly Ash
199	Zincum Sulphas	Zin Sul	Sulphate of Zinc
200	Zincum	Zinc	Zinc

ANTIDOTES. DISEASES.

171 Lemon Juice.—Menstrual difficulties, sick headache, ozena.
172 Camphor.—Old ulcers, diseased bones.
173 Coffee.—Nervous sick headache, neuralgia, worms, toothache.
174 Camphor.—Croup, hoarseness, spitting blood.
175 Camphor.—Hemopthysis, bronchitis, diabetes, cough.
176 Pulsatilla.—Cardilagia, mucous consumption.
177 Camphor.—Toothache, rheumatism of joints and muscles.
178 Lobelia.—Brain fever, spasms, hydrophobia, asthma.
179 Aconite, Puls.—Useful in scrofulous and skin diseases.
180 Magnesia, Lemon Juice.—Night sweats, bed sores, mercurial saliv'n
181 —Applied externally for old ulcers.
182 Lobelia, Coffee.—Hernia, sea sickness, renal colic.
183 Vinegar.—Torpid liver, flatulence, hives.
184 Tannin, Ipecac.—Croup, smallpox, cough, pneumonia, yellow fever
185 Coffee.—Bloody urine, rheumatism, typhus, worms.
186 Camphor.—Colic and wakefulness of infants.
187 Sassafras.—Cancer of the womb, syphilis, gonorrhœa.
188 Ipecac.—Bilious colic, asthma, rheumatism, bilious fever.
189 Belladonna.—Hives, burns, gravel, dysentery.
190 Coffee.—Nervous pains, epilepsy, rheumatism.
191 Smallpox.—This is the only reliable article for vaccination.
192 —Piles, varicose veins, fever sores.
193 Camphor.—Cholera, cramps, vomiting, colic.
194 Coffee.—Female diseases, fevers, use instead of aconite.
195 Pulsatilla.—Hysteria, cancer, after pains, prevents miscarriage.
196 Sulphur.—Eruptions and skin diseases.
197 —Scald head, fetid urine.
198 Ammonia.—Salivation, amenorrhœa, catarrh.
199 Hepar Sul., Ignatia.—Somnambulism, nervous diseases.
200 Hepar Sul., Ignatia.—Red eyelids, spasms, paralysis, pimples.

MEDICAL DICTIONARY

—OR—

GLOSSARY.

Ab-do'-men. The belly, or the lower part of the body below the diaphragm.

Ab-lu'-tion. Cleansing by water; washing of the body externally.

Ab-nor'-mal. Unnatural; not according to rule; irregular.

A-bor'-tion. Birth of a child before the proper time.

A-bra'-sion. A superficial wound produced by rubbing off of the skin.

Ab-sorb'-ent. Glands and vessels which absorb or suck up substances from within or without; also medicines which absorb, or combine with acid matter in the stomach or bowels.

Ac-couch-eur' (ak-koosh-ur'). A man who attends women in childbirth.

Ac-e-tab'-u-lum. The socket that receives the head of the thigh bone.

A-cho'-li-a. Deficiency of bile.

A-cid. Acrid; sour, sharp, pungent, bitter or biting to the taste.

Ac'-tual Cau-ter-y. Burning or searing with a hot iron; used in surgery.

Ac-u-punc'-ture (ak-u-punk'-ture). Pricking with needles; one of the operations of surgery.

A-cute'. Diseases of short duration, attended with violent symptoms; the reverse of chronic.

Ad-he'-sive. Tenacious, sticky; apt or tending to adhere.

Ad-he'-sive Plas-ter. Sticking plaster.

Ad'-i-pose. Matter, membrane or tissue; fat.

Ad'-ju-vant. A substance added to a prescription to aid the operation of the principal ingredient.

A-dult' Age. A person grown to full size or strength; manhood or womanhood.

Af-fec'-tion. Disorder, disease, malady.

Al-bu'-men. The white of an egg. It is an essential constituent of animal bodies.

Al-bu'-mi-nose. A substance produced in the stomach during digestion.

Al'-i-ment. Nourishment, nutrition; anything necessary for the support of life.

Al-i-ment'-a-ry Ca-nal. The tube by which aliments are conveyed through the body; it is composed of the mouth, pharynx, esophagus, stomach and intestines.

Al'-ka-li (li or le). A substance which, when united to acids, neutralizes them.

Al'-ter-a-tive. A remedy which slowly changes the condition of the system.

Al-ve'-o-lar. Relating to the sockets of the teeth.

Al'-vine. Relating to the intestines.

Am-aur-o'-sis. A loss or decay of sight, produced by various causes.

A-mel'-i-o-ra'-tion. Becoming better; improvement in stages of a disease.

Am-en-or-rhe'-a. An obstruction of the menstrual discharges.

Am-ni-ot'-ic Liquid. The fluid surrounding the fœtus in the womb.

Am-pu-ta'-tion. The operation of cutting off a limb or other part of the body.

A-na-sar'-ca. A dropsy of the whole body; a general dropsy.

A-nas'-to-mose. To communicate with each other; applied to arteries and veins.

A-nat'-o-my. Study of the structure of the body.

An-chy-lo'-sis (ank-y-lo'-sis). Stiffness of the joint.

An-em'-i-a. Poverty of blood; a comparatively bloodless state.

An-es-the'-sia. Numbness or paralysis of sensation.

An'-eu-rism. A soft tumor, caused by the rupture of the coats of an artery.

An-i-mal'-cules. Animals so small as to be visible only with a microscope.

An'-o-dyne. Any medicine which allays pain and induces sleep.

Ant'-a-cid. A substance which neutralizes acids; alkalies are antacids.

An'-thel-min-tic (an'-thel-min-tik). A medicine that destroys worms.

An'-thrax. A dusky red or purplish kind of tumor, occurring in the neck.

An-ti-bil'-ious (an-ti-bil'-yus). A medicine counteractive of bilious complaints.

An'-ti-dote. A protective against, or remedy for, poison or any disease.

An-ti-dys-enter'-ic (an-ti-dys-in-ter'-ik). A remedy for dysentery.

An-ti-e-met'-ic (an-ti-e-met'-ik). A remedy to check or allay vomiting.

An-ti-lith'-ic (an-ti-lith'-ik). A medicine to prevent or remove urinary calculi or gravel.

An-ti-mor-bif'-ic. Anything to prevent or remove disease.

An-ti-scorbu'-tic. A remedy used for the scurvy.

An-ti-sep'-tic (an-ti-sep'-tik). Whatever resists or removes putrefaction or mortification.

An-ti-spas-mod'-ic. Medicines which relieve cramps, spasms, and convulsions.

A-nus. The orifice of the alimentary canal, of which it is the outlet.

A-or'-ta. The great artery from the heart.

Ap'-a-thy. Insensibility to mental or bodily pain.

A-pe'-ri-ent. A mild purgative or laxative.

A-pex. The top or summit.

A-pha'-si-a. A lack of the power of speech, caused often by an attack of apoplexy.

A-pho'-nia. A loss of the voice.

Ap'-pe-tite. A desire for food or drink.

A-ro'-ma. Agreeable odor of plants and other substances.

Ar-o-mat'-ic. A fragrant, spicy medicine.

Ar'-te-ry. A vessel that conveys the blood from the heart to the organs.

Ar-thro'-di-a. A joint movable in every direction.

Ar-tic-u-la'-tion. The union of bones with each other, as at the joints.

Ar-tic'-u-lated. Having joints.

As-car'-i-des. Pinworms or threadworms found in the lower portion of the bowels.

As-ci'-tes. Dropsy of the abdomen.

As-phyx'-ia. Suspended animation; apparent death, as from drowning.

As-sim-i-la'-tion. The process by which the food is changed into tissue.

As-then'-ic. Debilitated.

As-trin'-gent. A medicine which contracts or puckers up the tissues of the body, thereby checking discharges.

At'-o-ny. Debility; want of tone; defect of muscular power.

At'-ro-phy. A wasting of flesh and loss of strength without any sensible cause.

At-ten'-u-ants. Medicines for reducing the body.

Au'-ri-cle. A cavity of the heart.

Aus'-cul-ta'-tion. The art of detecting disease by listening to the sounds of the lungs, heart, etc.

Ax-il'-la. The armpit; hence axillary, pertaining to the armpit.

Ax'-il-lary Glands. Situated in the armpit, secreting a fluid of peculiar odor.

Bal-sam'-ics. Medicines employed for healing purposes.

Bi-en'-ni-al. Continuing alive for two years.

Bile or **Gall.** A fluid secreted by the liver, which promotes digestion.

Blis'-ter. A thin watery bladder on the skin.

Bou'-gie (boo'-zhe). A taper body introduced into a passage or sinus to keep it open or enlarge it.

Bright's Disease. A serious disease of the kidneys.

Bron'-chi-al. Pertaining to the branches of the windpipe in the lungs.

Bul'-bous. Round or roundish.

Ca-chex'-y (ca-keks'-y). A bad state of the body. It may be caused by blood poisons.

Cal'-cu-li. Gravel and stone found in the kidneys and bladder.

Cal'-lous. Hard or firm.

Ca-lor'-ic. Heat.

Cap'-il-la-ry. Fine, hair-like.

Cap'-sule. A dry, hollow vessel containing the seed or fruit.

Car'-bon. Charcoal.

Car-bon'-ic Acid Gas. A gas of two parts of oxygen and one part of carbon.

Ca'-ri-es. Ulceration of a bone.

Car-min'-a-tives. Medicines which allay pain by expelling wind from the stomach and bowels.

Ca-rot'-id Artery. The great arteries of the neck that convey blood to the heart.

Car'-ti-lage. A hard elastic substance of the body; gristle.

Cat-a-me'-ni-a. The menses, or monthly discharges of women.

Cat'-a-plasm. A poultice.

Ca-tarrh' (ka-tar'). A discharge from the head or throat.

Ca-thar'-tic. Purgative; a medicine that cleanses the bowels.

Cath'-e-ter. A curved instrument introduced into the bladder through the urethra for drawing off the urine.

Caus'-tic. Burning; a substance which burns or corrodes living tissues.

Cau'-ter-y. A burning or searing any part of the animal body.

Cell. A small elementary form found in vegetable and animal tissue.

Cer'-e-bel'-lum. The lower and back part of the brain.

Cer'-e-bral. Relating to the brain.

Cer'-e-brum. The upper and front part of the brain.

Cer'-e-bro-Spi'-nal. Pertaining to the brain and spinal cord.

Ce-ru'-men. The ear wax.

Cha-lyb'-e-ate (ka-lib'-e-ate). Containing iron in solution, as occurring in mineral springs.

Chan'-cre (shank'-er). A venereal or syphlitic sore.

Chol'-a-gogues. Medicines that increase the flow of bile, as calomel and podophyllin.

Chol'-er-ic (kol'-er-ic). Easily irritated; irritable.

Chor-dee'. A painful drawing up of the penis. It occurs in gonorrhea.

Chron'-ic. Continuing for a long time, and becoming a fixed condition of the body.

Chyle (kil). A milky fluid, separated from the aliment in the intestines, mixing with and forming the blood.

Chyme (kim). The pulp formed by the food after it has been for some time in the stomach, mixed with the gastric secretions.

Ci-ca'-trix. A scar that remains after a wound.

Cir-cu-la'-tion. The motion of the blood, which is propelled by the heart through the body.

Clav'-i-cle (klav'-i-kl). Collar-bone.

Cli'-mac'-ter-ic. A term generally applied to the time at which the menses finally cease.

Clys'-ter. An injection; a liquid substance thrown into the lower intestine.

Co-ag'-u-la'-tion. A change from a fluid to a solid condition, as in the coagulation of the blood.

Co-ag'-u-lum. A clot of blood.
Co-a-lesce' (ko-a-les'). To grow together; to unite.
Col-lapse'. Sudden failure or prostration of the vital functions.
Col-liq'-ua-tive (kol-lik'-wa-tiv). Excessive discharges from the body which weaken the system.
Co'-lon. A portion of the large intestine.
Co-los'-trum. The earliest secretion of milk.
Co'-ma, Com'-a-tose. Lethargy; disposed to sleep; stupor.
Com'-press. Several folds of linen rags; a bandage.
Con-cus'-sion (kon-kush'-un). A violent shock, as of the brain.
Con'-flu-ent. Running together.
Con-gen'-i-tal. From birth, or born with.
Con-ges'-tion (kon-jest'-yun). Distention of any part by an accumulation of blood.
Con-junc'-ti-va. The membrane which lines the eyelid and covers the eye.
Con-sti-pa'-tion. Costiveness; obstruction or hardness of the contents of the intestines.
Con-ta'-gious. Catching, or that may be communicated by contact.
Con-tu'-sion. A bruise.
Con-va-les'-cence. Gradual return to health after sickness.
Con-vul'-sions. Involuntary and violent movements of the body.
Cor'-dial. A medicine that mildly stimulates and raises the spirits.
Cor'-ne-a. The transparent membrane in the forepart of the eye.
Corpse. The dead body of a human being.
Cor-rob'-o-rants. Tonics or strengthening medicines.
Cor-ro'-sive. Substances that consume or eat away.
Coun'-ter-ir-ri-ta'-tion. Drawing disease from one part by irritating another part.
Cra'-ni-um. The skull.
Cri'-sis. The turning point of a disease.
Cru'-di-ty. Rawness; indigestion.
Cu-ta'-ne-ous. Pertaining to the skin, as cutaneous diseases.
Cu'-ti-cle (ku'-ti-kl). The outer or scarf skin.
Cyst. A bag or sac containing matter or other fluid.
De-bil'-i-ty. Weakness.
De-coc'-tions (de-kok'-shuns). Medicines prepared by boiling.
Deg-lu-ti'-tion. The act of swallowing.
Del-e-te'-ri-ous. That which is hurtful.

De-liq'-ui-um (de-lik'-we-um). Fainting.

De-lir'-i-um. Wildness or wandering of the mind.

De-mul'-cents. A mucilaginous medicine which soothes diseased mucous membranes.

Den-ti'-tion. Teething.

De-ob'-stru-ent. A mild laxative ; an aperient.

De-ple'-tion. Diminution of the quantity of blood by blood-letting or other process.

Dep'-u-ra-tion. Cleansing from impure matter.

Derm. The natural tegument or covering of an animal.

Des-qua-ma'-tion. Separation of the skin in scales ; scaling off.

De-ter'-gent. A medicine that cleanses from offending matter.

Di-ag-no'-sis. The act of distinguishing diseases by symptoms.

Di-a-pho-ret'-ics. Medicines which promote perspiration or sweating.

Di'-a-phragm (di'-a-fram). The muscular division between the chest and the abdomen.

Di-ath'-e-sis. Tendency of the body to any form of disease, as scrofulous diathesis.

Di-e-tet'-ic. Relating to diet or regimen.

Dil-a-ta'-tion. Act of expanding or spreading in all directions.

Dil'-u-ents. That which thins, weakens, or reduces the strength of liquids.

Di-lut'-ing. Weakening.

Dis-cu'-tients. Medicines which scatter a swelling or tumor, or any coagulated fluid or body.

Dis-in-fec'-tants. Articles which cleanse or purify infected places.

Dis-lo-ca'-tion. The displacement of a bone out of its socket.

Dis-po-si'-tion. Tendency.

Di-u-ret'-ic. A medicine that promotes the flow of urine.

Dor'-sal. Pertaining to the back.

Dras'-tics. Active or strong purgatives.

Du-o-de'-num. The first of the small intestines.

Dys'-cra-sia. A bad habit of body producing generally a diseased condition of the system.

Dys-pep'-sia. Indigestion or difficulty of digestion.

Dys-pha'-gi-a. Difficulty of swallowing.

Dysp-nœ'-a. Difficulty of breathing.

Dys-u'-ri-a. Difficulty in discharging urine, attended with pain and heat.

Eb-ul-li'-tion. The motion of a liquid by which it gives off bubbles of vapor as in boiling.

Ef-fer-ves'-cence. The escape of gas from a fluid, as in the so-called "soda-water."

Ef-flo-res'-cence. Eruption or redness of the skin, as in measles, scarlet fever, etc.

Ef-flu'-vi-a. Exhalations from substances, as from flowers or decaying matter.

Ef-fu'-sion. An escape of the fluids of the body from their natural position into the tissues or cavities of the body.

E-lec-tri-za'-tion. Medical use of the electric currents.

E-lec'-tu-ary. Medicines mixed with honey or syrup.

E-lim-i-na'-tion. Discharged from the body, as by the pores of the skin.

E-ma-ci-a'-tion. Wasting away of the flesh.

Em'-bry-o. The early stage of the fœtus.

Em'-e-sis. Vomiting.

E-met'-ics. Medicines given to cause vomiting.

Em-men'-a-gogue. A medicine which promotes the menstrual discharge.

E-mol'-li-ent. A softening application which allays irritation.

E-mul'-sion. A mixture; as oil and water mixed with mucilage or sugar.

E-nam'-el. The outside covering of the teeth.

En-ceph'-a-lon. The whole of the brain.

En-cys'-ted. Enclosed in a cyst or sac.

En-dem'-ic. A disease peculiar to a certain district.

E-ne'-ma. An injection.

En-er-va'-tion. A loss of nervous tone and reduction of strength.

En-te-ri'-tis. Inflammation of the bowels.

En-to-zo'-a. Intestinal worms living in some part of an animal body.

E-phem'-e-ral. Of short duration.

Ep-i-dem'-ic. A disease that prevails.

Ep-i-derm'-is. The scarf skin; the cuticle.

Ep-i-gas'-tric. Pertaining to the upper and anterior part of the abdomen.

Ep-i-glot'-tis. A leaf-shaped cartilage, whose use is to prevent food or drink from entering the larynx and obstructing the breath while eating.

Ep-i-lep'-tic. Subject to epilepsy or the falling sickness.

E-piph'-o-ra. An overabundant secretion of tears, causing what is termed a watery eye.

Ep-i-spas'-tic. An application for blistering.

Ep-is-tax'-is. Bleeding from the nose.

Ep-i-the'-li-um. A layer of cells covering membranes.

Er'-e-thism. Morbid energetic action of irritability.

E-ro'-sion. Eating away; corrosion.

Er'-rhine (er'-rin). A medicine for snuffing up the nose to promote the discharge of mucous.

E-ruc-ta'-tion. Belching; gulping of wind from the stomach.

E-rup'-tion. A breaking out on the skin.

Es'-char (es'-kar). The dead part, killed by caustic or mortification, which falls off.

Es-cha-rot'-ic. Caustic; an application which sears or destroys the flesh.

Eu-sta'-chi-an Tube (yu-sta'-ki-an). A narrow canal connecting the middle ear and throat.

E-vac-u-a'-tion. Movement of the bowels, or passing of urine from the bladder.

Ex-ac-er-ba'-tion (egz-as-er-ba'-shun). Increase of severity in a disease.

Ex-an-the'-ma. An eruptive disease, with fever, as small-pox, measles.

Ex-ci'-sion. Cutting out of a part.

Ex-cit'-ant. A stimulant.

Ex-co'-ri-ate. To abrade or scrape off the skin in any way.

Ex-cres'-cence. An abnormal or unnatural growth of a part, as a wart or tumor.

Ex-cre'-tion. Waste matter thrown off from the system, as the perspiration, fæces, etc.

Ex-fo'-li-ate. Scaling or peeling off; separation of decayed from living bone.

Ex-ha-la'-tion. Emission of vapor, air, gas, etc.

Ex-os-to'-sis. An unnatural growth from a bone; a bony tumor.

Ex-pec'-to-rant. A medicine which aids the discharge of phlegm from the bronchial tubes or lungs.

Ex-pec-to-ra'-tion. Discharge of phlegm, mucous, or saliva from the mouth.

Ex-pi-ra'-tion. The act of breathing out the air from the lungs.

Ex-trav-a-sa'-tion. Effusion; emptying or forcing a fluid out of its proper vessels.

Ex-u-da'-tion. Perspiration; the discharge of moisture on the surface of bodies.

Fæ'-cal (fe'-kal). Pertaining to the fæces.

Fæ'-ces (fe'-cez). The natural dicharges of the bowels.

Far-a-diz-a'-tion. The use of the Faradaic current.

Far-i-na'-ceous. Containing starch, as *farinaceous food*, starchy food.

Fau'-ces. The back part of the mouth, at the entrance of the throat.

Feb'-ri-fuge. A medicine which assuages fever and produces perspiration.

Fe'-brile. Having the symptoms of fever; feverish.

Fe'-mur. The thigh bone. **Femoral**, pertaining to the femur.

Fet'-id. Having a rank, disagreeable odor.

Fi'-brine. Animal matter found in blood.

Fi'-brous. Composed of small threads or fibres.

Fil'-ter. A strainer.

Fil-tra'-tion. Straining.

Fist'-u-la. A deep, narrow, crooked ulcer.

Flac'-cid (flak'-sid). Soft and weak, lax, limber; as a flaccid muscle.

Flat'-u-len-cy, Fla'-tus. Wind in the stomach and intestines causing uneasiness.

Flex'-i-ble. Easily bent; yielding to pressure.

Flood'-ing. Profuse flow of blood.

Flush. A sudden flow of blood to the face.

Flux. An unusual discharge from the bowels.

Fœ'-tus (fe-tus). The child in the womb.

Fo-men-ta'-tion. Bathing by means of flannels dipped in hot water or medicated liquid.

For-mi-ca'-tion. A sensation like the creeping of ants.

For'-mu-la. A prescription.

Fract'-ure. A broken bone.

Fric'-tion. The act of rubbing.

Fu-mi-ga'-tion. A vapor raised by burning.

Func'-tion. The work or office performed by any part or organ of the body.

Fun'-da-ment. The seat; the lower extremity of the large intestine.

Fun'-gus. A spongy excrescence, as proud flesh.

Gal-van-i-za'-tion. Use of the galvanic current.
Gan'-gli-on (gang'-gli-on). An enlargement in the course of a nerve.
Gan'-grene. Mortification or death of a part.
Gar'-gle. A wash for the mouth and throat.
Gas'-tric. Belonging to the stomach.
Gas-tri'-tis. Fever or inflammation of the stomach.
Ges-ta'-tion. The period of pregnancy.
Gland. A soft body, the function of which is to secrete some fluid.
Glot'-tis. The opening into the windpipe, covered by the epiglottis.
Glu'-te-us. A name given to the muscles of the hip.
Gran-u-la'-tion. The healing of a wound or ulcer by the formation of grain-like fleshy masses.
Gru'-mous. Thick; clotted; concreted; as grumous blood.
Gut'-tur-al. Pertaining to the throat.
Hab'-it. A peculiar state or temperament of the body.
Hec'-tic. A remitting fever, with chills, heat and sweat.
Hem-a-to'-sis. An excessive or morbid quantity of blood.
Hem-i-ple'-gia. Paralysis of one side of the body.
He-mop'-ty-sis. A spitting of blood.
Hem'-or-rhage. Bleeding; a flow of blood, as from the lungs, nose, etc.
Hem'-or-rhoids. The piles; tubercles from which blood or mucus is discharged.
He-pat'-ic. Pertaining to the liver.
Her-ba'-ceous (her-ba'-shus). Pertaining to herbs.
He-red'-i-tary. Descended from a parent; inherited.
Her'-pes. An eruption on the skin, as tetter, ringworm, etc.
Her'-ni-a. A rupture, and protrusion of some part of the abdomen.
Hu'-mors (yu'-mors). The fluids of the body.
Hy'-dra-gogue (hy'-dra-gog). A purgative that produces a watery discharge from the bowels.
Hy'-dro-gen. One of the elementary principles, always existing in water, of which it composes the ninth part.
Hy-dro-pho'-bia. A dread of water; the rabid qualities of a mad dog.
Hy'-gi-ene. The art of preserving health.
Hy-per-es-the'-si-a. Excessive and abnormal sensibility.
Hyp-o-chon-dri'-a-cal. Mealancholy; very dejected; low-spirited.
Hyp-not'-ics. Medicines which cause sleep.

Hy-po-der'-mic. Under the skin.
Hy-ster'-ic-al. Nervous; subject to hysteria.
I'-chor (i'-kor). A thin, watery, and acrid discharge from an ulcer.
Id'-i-op'-a-thy. A morbid condition not preceded by any other disease.
Id-i-o-syn'-cra-sies. Peculiarities of constitution or temperament.
Il'-e-um. The lower part of the small intestines.
Il'-i-ac. Pertaining to the small intestines.
Im-be-cil'-i-ty. Feebleness; weakness of mind or intellect.
Im-mer'-sion. Plunging under water.
In-a-ni'-tion (in-a-nish'-un). Emptiness; weakness; exhaustion.
In-ci'-sor. A front tooth that cuts or divides.
In-dig'-e-nous. Native to a country.
In-di-gest'-i-ble. Difficult of digestion.
In-dis'-po-si-tion. A disorder of health.
In-fec'-tion. Contagion.
In-flam-ma'-tion. A redness or swelling of any part.
In-fu'-sion (in-fu'-zhun). Medicine prepared by boiling or steeping.
In-ges'-tion (in-jest'-yun). Throwing into the stomach.
In-jec'-tion (in-jek'-shun). Liquid sent into some part of the body by means of a syringe.
In-oc-u-la'-tion. Communicating a disease to a person in health by inserting contagious matter in the skin.
In-spi-ra'-tion. Drawing or inhaling air into the lungs.
In-spis-sa'-tion. Rendering a fluid thicker by evaporation.
In-teg'-u-ment. A covering; the skin.
In-ter-cos'-tal. Between the ribs.
In-ter-mit'-tent. Ceasing at intervals.
In-tes'-tines. The bowels.
Joint. The junction of two or more bones; articulation.
Lac'-er-a'-ted. Torn asunder.
Lach'-ry-mal (lak'-ri-mal). Pertaining to the tears.
Lac-ta'-tion. Act of nursing, or sucking.
Lan'-ci-na-ting. Piercing, as with a sharp pointed instrument; hence lancinating pain.
Lan'-guor (lang'-gwur). Feebleness, weakness, lassitude of body.
Lar'-ynx. The upper part of the windpipe.
Lax'-a-tive. A mild purgative; a medicine that loosens the bowels.
Le'-sion. A rupture or tearing of the flesh; a wound.

Leth'-ar-gy. Unusual or excessive drowsiness.
Leu-cor-rhe'-a. A white or yellowish discharge from the womb.
Lig'-a-ture. A thread for tying blood-vessels to prevent hemorrhage.
Li-ga'-tion. The art of tying a vessel.
Lin'-i-ment. A medicated lotion or wash; a soft ointment.
Lith'-on-trip-tic. A solvent of the stone or gravel in the bladder.
Li-thot'-o-my. The operation of cutting for stone in the bladder.
Liv'-id. Black and blue; of a lead color.
Lo'-chi-al. Pertaining to discharges from the womb after childbirth.
Lum-ba'-go. Rheumatic pains in the loins and small of the back.
Lum'-bar. Pertaining to the loins.
Lymph (limf). A whitish fluid contained by the lymphatic vessels.
Lym-phat'-ic (vessels). Fine tubes pervading the body; absorbents.
Mac-er-a'-tion. Dissolving or softening with water.
Mac'-u-lar. Colored spots; blemishes.
Ma-la'-ri-a. Bad air; air which tends to cause disease.
Mal-for-ma'-tion. A wrong formation or structure of parts.
Ma-lig'-nant. Violent; dangerous; tending to produce death.
Mar'-row. A soft substance in the bones.
Mas-ti-ca'-tion. The act of chewing.
Mat-u-ra'-tion. The formation of pus or matter in any part of the body.
Me-dul'-la Oblongata. A nervous mass in the lower part of the brain.
Men'-ses, Menstruation. The monthly courses of women.
Men'-stru-um. A solvent; any liquid used to dissolve solid substances.
Me-phit'-ic. Suffocating; noxious; pestilential.
Met-a-car'-pus. The hand between the wrist and fingers.
Me-tas'-ta-sis. A change of disease from one part of the body to another.
Met-a-tar'-sus. The part of the foot between the ankle and the toes.
Mi-as'-ma, Miasmata. Malaria; exhalations from swamps and decaying matter.
Mor'-bid. Diseased; corrupt.
Mor-bif'-ic. Causing disease.
Mu'-ci-lage. A glutinous, viscid fluid substance.
Mu'-cus. The ropy, lubricating, tenacious fluid, secreted by the mucous membrane.
Mus'-cles (mus'-sls). The organs of motion; they constitute the flesh.

Nar-cot'-ics. Medicines that cause sleep, relieve pain, or stupefy.

Nau'-se-a (naw'-she-a). Sickness at the stomach, with a desire to vomit.

Ne'-gus. A liquor made of wine, water, sugar, nutmeg, and lemon juice.

Ne-phrit'-ic. Pertaining to the kidneys.

Ner'-vine. A medicine that acts on the nerves.

Neu-ral'-gia. Pain of a nerve without apparent inflammation.

Neu-ras-the'-nia. Nervous exhaustion.

Nor'-mal. Natural; regular.

Nos'-trum. A quack or patent medicine.

Nu-tri'-tious (nu-trish'-us). A substance which nourishes or feeds the body.

Ob'-long. Longer than broad.

Ob-tuse'. Dull, not acute.

Œ-de'-ma. A watery swelling.

Ol-fac'-tory Nerves. The nerves of smell.

O-men'-tum. The caul or covering of the bowels.

Oph-thal'-mi-a (of-thal'-mi-a). Inflammation of the eyes.

O'-pi-ates. Medicines which promote sleep.

Op'-tic Nerve. The nerve which enters the back part of the eye.

Or-thop-nœ'-a. Great difficulty of breathing, caused by diseases of the heart or diaphragm, or asthma.

Os'-si-fy. To change flesh or other soft matter into a hard, bony substance.

O'-vate. Oval; egg-shaped.

O'-vum. An egg.

Ox'-y-gen. A gas that forms one-fifth of the atmosphere.

Pal'-ate. The partition separating the cavity of the mouth from that of the nose.

Pal-pi-ta'-tion. Unnatural action of the heart, in which it beats too rapidly and strongly.

Pan-a-ce'-a. A cure-all; a universal medicine.

Pa-pil'-la. A red, elevated point upon the tongue or elsewhere.

Par-a-cen-te'-sis. Puncturing of the chest or abdomen for the purpose of drawing off water.

Pa-ral'-y-sis. Palsy; a loss of the power of motion in any part of the system.

Par-a-lyt'-ic. One affected with or inclined to palsy.

Par-a-ple'-gi-a. Paralysis of the lower half of the body.
Par'-ox-ysm. A fit of disease taking place periodically.
Par-tu-ri'-tion. Child-birth.
Pec'-tor-al. Pertaining to the chest.
Pel'-vis. A bony cavity forming the lower part of the trunk of the body.
Pep'-sin. An important element of the gastric juice.
Per-i-car'-di-um. The sac enclosing the heart.
Per-spi-ra'-tion. Sweat; insensible evacuation of the fluids through the pores of the skin.
Per-i-ne'-um. The space between the anus and the testicles.
Per-i-os'-te-um. A thin, hard membrane covering the bones.
Per-i-to-ne'-um. The membrane lining the abdomen and covering the bowels.
Pe-te'-chi-æ. Purple spots which appear upon the skin in low fevers.
Phag-e-den'-ic. Corroding; eating; applied to ulcers.
Pha-lan'-ges. The bones of the fingers and toes.
Phleg-mat'-ic. Abounding in phlegm; cold; dull; sluggish; heavy.
Phar'-ynx. The upper part of the throat.
Phlo-gis'-tic. Inflammatory.
Phthys'-ic-al (tiz'-ik-al). A condition of the system tending to pulmonary consumption.
Phlegm (flem). A stringy mucus of the respiratory and digestive passages.
Ple'-thor-ic. Of a full habit of body.
Pleu'-ra. A membrane that lines the inside of the chest and covers the lungs.
Pleu'-ri-sy. Inflammation of the pleura.
Pneu-mo-ni-a (nu-mo-ni-a). Inflammation of the substance of the lungs.
Pol'-y-pus. A pear shaped tumor.
Pre-scrip'-tion. The formula for the preparation of medicines.
Probe. An instrument for examining the depth of a wound.
Prog-no'-sis. The art of foretelling the termination of a disease.
Proph-y-lac'-tic. A medicine to prevent disease.
Pty'-a-lism (ty'-a-lism). A copious flow of saliva; salivation.
Pu-bes'-cent. Covered with down or very short hairs.
Pul'-mo-na-ry. Pertaining to or affecting the lungs.
Pulp. A soft mass.

Pulse. The beating or throbbing of the heart or blood-vessels, especially to the arteries.

Pun'-gent. Sharp, piercing, biting, stimulating.

Pur'-ga-tive. A medicine acting on the bowels to loosen them.

Pu'-ru-lent. Consisting of pus or matter.

Pus. Yellowish white matter, found in abscesses, etc.

Pus'-tules. Elevations of the skin having an inflamed base and containing pus.

Pu-tres'-cent. Becoming putrid; pertaining to the process of putrefaction.

Py-ro'-sis. A peculiar disease of the stomach called water-brash.

Rec'-tum. The termination of the large intestine.

Re-frig'-er-ant. Medicines which lessen the heat of a body.

Reg'-i-men. The regulation of diet in order to preserve or restore health.

Res-o-lu'-tion. Dispersion of an inflammation before pus has formed.

Re-solv'-ents. Medicines to dissipate inflammation.

Res-pi-ra'-tion. The process of breathing.

Re-sus-ci-ta'-tion. Reviving from apparent death, as drowning.

Ret'-i-na. The semi-transparent, internal nervous tissue of the eye.

Ru-be-fa'-cients (shents). Applications that cause redness of the skin.

Ru-bif'-ic. Making red.

Sac'-cha-rine (rin). Sugary; having the qualities of sugar.

Sa-li'-va. The spittle; the secretions of the salivary glands of the mouth.

Sal-i-va'-tion. Increase of the secretion of saliva.

San'-a-tive. Healing, or tending to heal.

San'-guine (sang'-gwin). Abounding in blood, or having the color thereof.

Sa'-ni-es. A thin, often purulent discharge from wounds or ulcers.

Scab. A crust formed over a sore in healing.

Scarf-Skin. The outer skin of the body.

Scir'-rhous (skir'-rus). Hard; knotty.

Scor-bu'-tic. Pertaining to, or partaking of the nature of scurvy.

Scro'-tum. The bag containing the testicles.

Se-cre'-tion. The separation of any substance from the blood for a special purpose.

Sed'-a-tive. A quieting medicine which allays irritation and soothes pain.

Sed'-en-ta-ry. Accustomed to, or requiring much sitting; inactive.
Sem'-i-nal. Pertaining to, or contained in seed.
Se'-rous. Thin, watery, like whey.
Se'-rum. The watery parts of the blood, or of milk.
Si-al'-o-gogues. Medicines that promote the flow of saliva.
Sin'-a-pism. A mustard plaster.
Sin'-ew (sin'-yu). that which unites a muscle to a bone.
Slough (sluf). The part that separates from a wound.
Slough'-ing (sluff'-ing). The separation of the dead flesh from a sore.
So-lu'-tion. A liquid in which a solid substance has been dissolved.
Sol'-vent. Having the power to dissolve solid substances.
Sor'-des. The dark matter deposited upon the lips and teeth in low fevers.
Spasm. An involuntary contraction of the muscles.
Spe-cif'-ic. An infallible remedy.
Spi'-nal Col'-umn. The back-bone.
Spi'-nal Cord. The nervous marrow in the spinal column.
Spleen. The milt; it is situated in the abdomen and attached to the stomach.
Squa'-mous (squa'-mus). Scaly; having scales.
Ster'-num. The breast-bone.
Ster'-tor. Noisy breathing, as in apoplexy; snoring.
Ster-to'-rous. Snoring.
Stim'-u-lants. Medicines that excite.
Sto-mach'-ic. A cordial for the stomach, exciting its action.
Stool. A discharge from the bowels.
Stran'-gu-ry. Difficult and painful expulsion of urine.
Strict'-ure. Unnatural contraction of any passage of the body.
Stru'-ma. Scrofula.
Stu'-por. Insensibility; numbness.
Styp'-tic. A medicine which coagulates the blood, and stops bleeding.
Sub-cu-ta'-ne-ous. Under the skin.
Su-dor-if'-ics. Medicines that cause sweating.
Sup-pos'-i-to-ries. Medicinal substances introduced into the rectum to favor or restrain evacuations, or to ease pain.
Sup-pu'-ra-tion. Forming of pus.
Sut'-ure. The peculiar joint uniting the bones of the skull.
Symp'-tom. A sign or token; the peculiar marks of any disease.

Syn'-co-pe. Fainting or swooning.
Syn'-o-cha. Inflammatory fever.
Syph-i-lit'-ic. Pertaining to the venereal disease or pox.
Syr'-inge. An instrument for injecting liquids into the bowels, ear, throat, or other cavities of the body.
Tem'-per-a-ment. Individual constitution; a peculiar habit of body.
Ten'-don. A fibrous cord attached to to the extremity of a muscle.
Te-nes'-mus. A painful bearing down sensation in the lower bowels.
Tense, Tension. Rigid, hard, stiff; drawn tightly.
Tep'-id. Warm, but not hot.
Ter'-tian (ter'-shun). Occurring every other day.
Tes'-ti-cles. Two glandular bodies situated in the scrotum, belonging to the male organs of generation.
Tet'-a-nus. Locked jaw.
Tib'-i-a. The large bone of the leg below the knee.
Tinct'-ure. Medicine dissolved in alcohol.
Tho'-rax. The cavity in the chest.
To'-men-tose. Downy; nappy; covered with the finest hairs or down.
Tor-mi'-na. Severe griping pains.
Ton'-ics. Remedies which give tone and strength to the system.
Ton'-sil. Glands situated on each side of the throat.
Tor'-pid. Dull, stupid.
Tra'-che-a. The windpipe.
Tre'-mor. Involuntary shaking.
Tu'-ber-cle (tu'-ber-kl). A pimple, swelling, or small tumor.
Tu-me-fac'-tion. The act of swelling or forming a tumor.
Tu'-mor. A distention or enlargement of any part of the body; a swelling.
Ty'-phoid. Resembling typhus; weak; low.
Ty'-phus. A form of low, nervous fever, malignant, infectious, etc.
Ul'-cer. A sore, discharging pus.
Um-bil'-ic. The navel, or pertaining to the navel.
U'-rea. A substance found in the urine.
U-re'-ter. The duct or tube through which the urine passes from the kidneys to the bladder.
U-re'-thra. The canal of the penis through which the urine passes from the body.
U'-rine. Water evacuated from the bladder.

U'-ter-us. The womb.

U'-vu-la. The small conical body projecting from the middle or the soft palate.

Vac'-ci-nate (vak'-sin-nate). To inoculate with the cow-pox by inserting the vaccine in the skin.

Vac'-cine. (vak'-sin). Belonging to, or matter of, the cow-pox.

Va-gi'-na. The passage that connects the vulva with the womb.

Vag-in-is'-mus. Spasm of the vagina, caused by morbid irritability.

Val-e-tu-di-na'-ri-an. A person of a weak, infirm or sickly constitution.

Va-ri'-o-lous. Pertaining to or denoting small pox.

Ve'-hicle (ve'-hi-kl). A liquor in which to administer medicines.

Ven'-e-ry. Sexual intercourse.

Ve'-nous. Relating to the veins.

Ven-ti-la'-tion. A free admission or motion of air.

Ver'-mi-fuge. A medicine that expels worms.

Ver'-ti-go. Dizziness; swimming of the head.

Ves'-i-ca-ting. Blistering.

Ves'-i-cle (ves'-i-kl). A little bladder of water formed under the skin.

Vir'-u-lent. Extremely injurious; malignant; poisonous.

Vi'-rus. Active, contagious matter.

Vis'-ce-ra. The internal organ of the body.

Vis'-cid. Glutinous; sticky; tenacious.

Vit'-re-ous Humor. One of the fluids of the eye, resembling glass.

Vol'-a-tile. Easily evaporated; substances that waste away on exposure to the atmosphere.

Vul'-ner-a-ry. Pertaining to wounds.

Vul-va. The external parts of the female organs of generation.

Zy-mot'-ic. Contagious; infectious; such diseases as may be inoculated.

Care & Preservation of the Teeth,

—BY—

DR. S. B. BARTHOLOMEW,

SPRINGFIELD, MASS.

First Dentition.—During this period the child requires more than ordinary watchfulness on the part of the mother. Difficulties incident to teething, cause a very large per cent. of mortality among children, which proper care would prevent. Systemic disturbance caused by cutting teeth is very marked, and can be easily seen. Symptoms:—Hot and dry mouth, feverishness, redness of one or both cheeks, sometimes changing from one to the other, indicating great nervous disturbance. Eruptions on the head and face, and sometimes on the whole body. Ulcerations may appear on the tongue, gums, lips, and inside of the cheeks. Fretfulness when awake, and moaning in sleep, nausea, vomiting, high fever, diarrhœa, or severe constipation, followed not infrequently by convulsions.

Treatment.—If there is a tendency to hot and dry skin, let the treatment be such as will keep the skin moist, look out for diarrhœa or constipation. If the gums are swollen, and indicate a pressure from beneath, they should be freely lanced over the erupting teeth; nervous irritation will be controlled by adding a little catnip tea to the milk. Watch the food so that digestion may not be impaired.

If the mother does not nurse the child, or the milk be deficient in quantity or quality, be careful to have the right milk for a substitute. Never take the milk from a milk cart, for that is a mixed milk of all the herd, and not fit to give a young babe. If possible, have the milk of a cow whose calf would be the age of the babe to be fed, rich in cream, and up to the standard of perfect milk. This milk will be richer in cascin, butter and phosphates, than human milk, but poorer in sugar; therefore, add one-third water, and a little pure white sugar. Aside from the mixed nature of milk sold from the cart, there is a possibility

that it may have already been watered, and then doctored with foreign matter to bring up color and taste. Supposing you take the milk from the cart, accepting it for a standard milk, any mother can readily see she is surely increasing the danger of fatal trouble during the period of teething.

Care of the Temporary Teeth. — The temporary teeth are designed by nature to remain until the permanent teeth are ready to take their places. Children should be taught to keep them clean by brushing. If they decay, they should be filled with some temporary filling, for decayed and painful temporary teeth will cause the child to avoid using them as much as possible. Food will be swallowed without sufficient mastication, the stomach become disordered in attempting to do the work designed for the temporary teeth, thus opening the way for sickness and suffering.

Care of the Permanent Teeth. — In all cases of trouble in second dentition consult your dentist. A little attention at such times will often prevent a long train of evils. The destruction of the teeth from decay, in a large degree, is in consequence of the action of chemical acids, and low forms of organic life produced through the fermentation and putrifaction of food and other substances. If this fermenting, filthy compost is allowed to remain on and between the teeth, myriads of little creatures grow and thrive in it, boring away at the tooth structure until it is gone. The remedy is cleanliness, antiseptic washes, and the dentist's skill. Teeth should be brushed thoroughly twice a day, morning and night, with a generous brush of medium stiffness, using some antiseptic wash in tepid water. Never mind if the gums bleed, it is an indication of foreign substance about the necks of the teeth, and inflammation of the gums. Have the foreign substance removed, and brush without regard to bleeding, they will soon become hard and healthy.

Never use dentifrices made of charcoal, or pumice stone, or any other gritty substance — they are too harsh — they injure the delicate tissue that surrounds and gives outer nourishment, through the thin layer of cementum that covers the roots of the teeth.

To stop pain in an exposed and inflamed dental pulp, rinse out the cavity with a little tepid water, apply cotton saturated in equal parts of camphor, chloroform and oil of cloves; shake before using. To stop pain in a dead tooth, apply cotton saturated in equal parts of camphor, hydrate of chloral and carbolic acid. Be careful and not have an excess of the liquid in the cotton, as it will run over the gums and burn the mouth.

A GOOD TOOTH POWDER.

Precipitated Carbonate of Lime,	4 ounces.
Pulverized Orris Root,	3-4 ounce.
Pulverized Peruvian Bark,	1-4 ounce.
Pulverized White Sugar,	1-4 ounce.

Flavor with that which is most agreeable to the taste.

A DELIGHFUL ANTI-SEPTIC MOUTH WASH.

Carbolic Acid,	5 drachms.
Listerine,	6 ounces.
Alcohol,	4 ounces.
Glycerine,	1 ounce.
Oil of Peppermint,	4 drops.
Red Aniline,	3 drops.

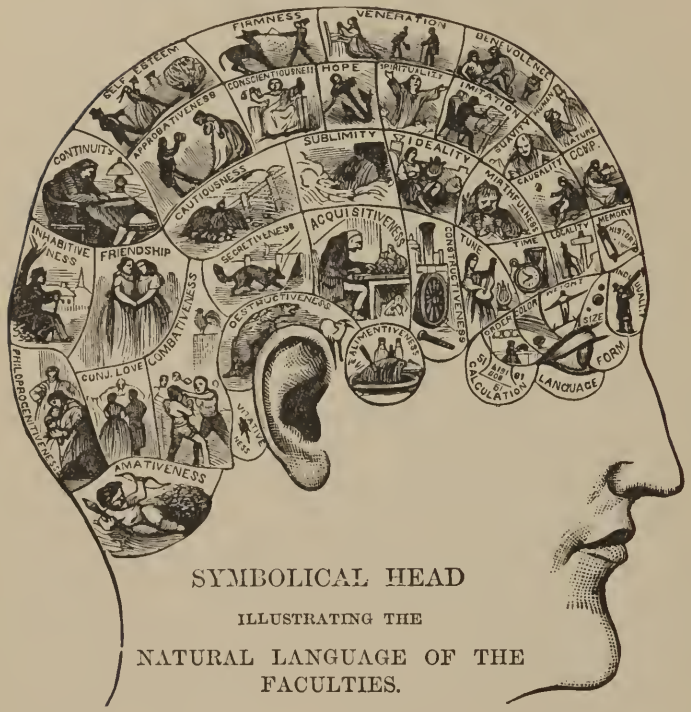
Table spoonful in wine glass of water, use weaker or in greater strength as may be most agreeable.

A good mouth wash in cases of fetid breath or inflamed gums:

Tincture of Krameria,	3 fluid ounces.
Eau de Cologne,	6 " "
Carbolic Acid crystals,	10 drops.
Oil of Wintergreen,	8 "

Put two teaspoonfuls of the above mixture to a wine glass of water. Use thoroughly three or four times a day.

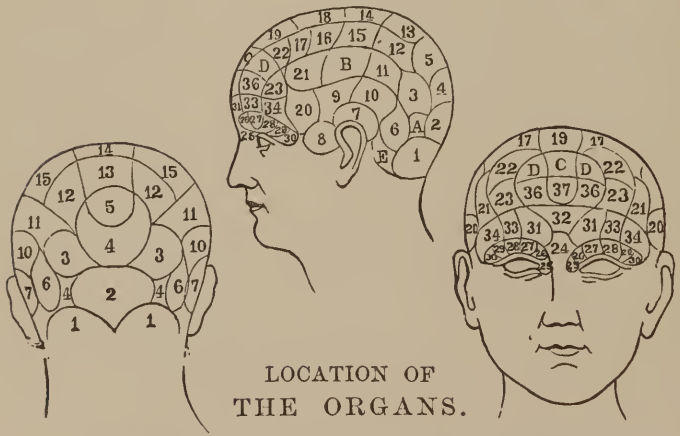
PHRENOLOGY DEFINED.



SYMBOLICAL HEAD

ILLUSTRATING THE

NATURAL LANGUAGE OF THE FACULTIES.



LOCATION OF THE ORGANS.

NAMES AND NUMBERS OF THE ORGANS.

DEFINITION OF THE ORGANS.

1. Amativeness, Love between the sexes—desire to marry.
A. Conjugality, Matrimony—love of one—union for life.
2. Parental love, Regard for offspring, pets, etc.
3. Friendship, Adhesiveness—sociability—love of society.
4. Inhabitiveness, Love of home and country.
5. Continuity, One thing at a time—consecutiveness.
E. Vitativeness, Love and tenacity of life—dread of annhilation.
6. Combativeness, Resistance—defense—courage—opposition.
7. Destructiveness, Executiveness—force—energy.
8. Alimentiveness, Appetite—hunger—love of eating.
9. Acquisitiveness, Accumulation—frugality—economy.
10. Secretiveness, Discretion—reserve—policy—management.
11. Cautiousness, Prudence—provision—watchfulness.
12. Approbativeness, Ambition—display—love of praise.
13. Self-Esteem, Self-respect—independence—dignity.
14. Firmness, Decision—perseverance—stability—tenacity of will.
15. Conscientiousness, Integrity—love of right—justice—equity.
16. Hope, Expectation—enterprise—anticipation.
17. Spirituality, Intuition—faith—"light within"—credulity.
18. Veneration, Reverence for sacred things—devotion—respect.
19. Benevolence, Kindness—goodness—sympathy—philanthropy.
20. Constructiveness, Mechanical ingenuity—sleight of hand.
21. Ideality, Refinement—love of beauty—taste—purity.
B. Sublimity, Love of grandeur—infinitude—the endless.
22. Imitation, Copying—patterning—mimicry—following examples.
23. Mirthfulness, perception of the absurd—jocoseness—wit—fun.
24. Individuality, Observation—desire to see and examine.
25. Form, Recollections of shape—memory of persons and faces.
26. Size, Cognizance of magnitude—measuring by the eye.
27. Weight, Balancing—climbing—perception of the law of gravity.
28. Color, Perception and judgment of colors, and love of them.
29. Order, Perception and love of method—system—arrangement.
30. Calculation, Cognizance of numbers—mental arithmetic.
31. Locality, Recollection of places and scenery.
32. Eventuality, Memory of facts and circumstances.
33. Time, Cognizance of duration and succession of time—punctuality.
34. Tune, Sense of harmony and melody—love of music.
35. Language, Expression of ideas—memory of words.
36. Causality, Applying causes to effect—originality.
37. Comparison, Inductive reasoning—analysis—illustration.
C. Human Nature, Perception of character and motives.
D. Agreeableness, Pleasantness—suavity—persuasiveness.

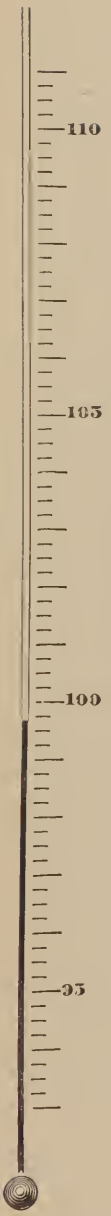
THE CLINICAL THERMOMETER

A GUIDEBOARD TO DISEASE.

The value of the information afforded by this little, simple structure cannot be over-estimated as a guide to the detection and treatment of disease.

Every mother ought to possess one of these thermometers, and be able to take the temperature of her children. *A single observation* will often reveal the true nature of a sudden or temporary indisposition. It will indicate the existence of many maladies in their earliest stages, and point out the necessity for prompt treatment.

The clinical thermometer has done more than anything to render accurate knowledge of the nature of disease, and to advance the art of treatment. It is in daily use in every hospital in this country, and ranks in importance with the stethoscope (*heart or lung tester*). The physician without his thermometer is like a mariner without his compass. In fact, one of these instruments should be in every family, or, at least, within the *immediate* neighborhood. The actual work of taking the temperature is simple and easily performed, and in many cases it is necessary to take the temperature six times in twenty-four hours; a careful record of the same being kept, will often greatly facilitate the efforts of the doctor in promoting a speedy recovery. A sudden rise or fall of the temperature of the patient foreshadows peril, several hours in advance, (as the barometer does the storm) the doctor may be summoned and enabled to ward off a deadly exacerbation or collapse.



SCALE OF THERMOMETER ENLARGED.

A clinical thermometer does not differ essentially from the common weather thermometer; it is smaller, more accurate, and is not supported in a frame. The figures are engraved on the glass, and are graduated from about 90 to 115 degrees. These thermometers are generally self-registering. At the top of the mercury there is a little piece which has purposely been left detatched, to serve as an index. Before taking the temperature this is shaken down to about 96 degrees; then, as the mercury rises, the detatched portion is left at the highest point reached.

The Graduating Scale is very simple and easily understood. Each of the long lines counts a degree, each degree is subdivided into four or five parts, thus securing accuracy in getting the exact temperature. The fractions are generally written decimally, thus: 3-4 are written .75.

The Normal Temperature of the body is about 98.4.

How To Take The Temperature. There are three regions where the temperature may conveniently be taken: the bowel, the arm-pit, and under the tongue. In the case of children, where the knowledge of the temperature is always important, the bowel is the most convenient and generally more preferable. The observation is quickly made and its accuracy is not influenced by the restlessness of the child. With adults the temperature is generally taken in the arm-pit, or under the tongue. The temperature under the tongue is more readily and quickly ascertained, and particularly in cases where patients are not confined in bed is more reliable.

The temperature of the extremities may be ascertained by holding the thermometer in the closed hand.

The following is the method of ascertaining the temperature under the armpit: the index should be shaken down, and the instrument warmed by holding in the closed hand for a moment. The patient, if

lying on the side, should be turned over, and the observation made in what was the lower armpit. The bulb of the instrument should be placed snugly within the folds of the armpit, carefully observing that it is in contact with the skin on all sides, and that none of the garments interfere. The fore-arm of the patient should be laid across the chest, while in this position, let the thermometer remain five minutes.

The temperature under the tongue is taken as follows: shake down the index and warm as before; place the bulb of the instrument as far back under the tongue as possible, close the mouth, and breathe through the nose for three minutes.

The temperature in the bowel is taken as follows: shake down the bulb and warm instrument as above directed; if the patient is an adult, he should lay on one side, with knees well drawn up; if a child, let it be placed on its chest across its mother's knees, or its legs may simply be held up enough to expose the parts; dip the instrument into sweet oil, and pass the bulb through the anus into the bowel for a space of about two inches, and let it remain three minutes.

The instrument should be thoroughly cleansed after each observation and in cases of contagious diseases, cleanse with carbolic acid or Tilden's fluid. The frequency of observations must be regulated by the urgency of the case.

In chronic illness, morning and evening will be sufficient; in cases of fever, etc., every three or four hours may be necessary, and in cases of imminent danger much oftener.

Clinical thermometers can be had at most all thoroughly equipped drug stores.

What is wanted is a "clinical self registering thermometer," they are made of all sizes. A four inch instrument will be found most convenient. In purchasing a clinical thermometer, do not be induced to buy a fancy case with a cheap instrument inside; cheap instruments are very little better than none.

By addressing W. C. King & Co., Springfield, Mass., and enclosing three dollars and ten cents ($3.10) you will receive a thermometer, by mail, which has been thoroughly tested by the professor of chemistry at Yale college, and warranted to be accurate. Each instrument is carefully packed, and guaranteed to reach its destination in perfect order.

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